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ABSTRACTS

FIBERS A

Natural fibers A1

NOTE ON THE RELATIONSHIP BETWEEN THE MEAN FIBER LENGTH AND THE FINENESS OF INDIAN COTTONS. H. Navkal, V. Sundaram, and R. L. N. Iyengar. Indian Cotton Growing Rev. 13: 477-478 (Nov. 1959).
The results indicated that, in general, mean fiber weight per unit length is lower and specific surface area higher for longer cottons than for shorter ones. 5 refs. (2858)

NOTE ON THE VARIATION OF GINNING PERCENTAGE OF SEED-COTTON WITH ATMOSPHERIC HUMIDITY. R. L. N. Iyengar. Indian Cotton Growing Rev. 12: 320-326 (Sept. 1958).
Cotton ginning experiments carried out at relative humidities of 10, 40, 60, and 85% indicated that the variation of ginning percentage with relative humidity is not of any practical importance. 9 refs. (2859)

COMPARATIVE MILL AND LABORATORY TESTS ON IMPROVED VARIETIES AND TRADE VARIETIES OF INDIAN COTTONS. R. L. N. Iyengar and V. Venkataraman. Indian Cotton Growing Rev. 13: 409-415 (Sept. 1959). (2860)

REPORT ON THE SURVEY OF QUALITY OF SOME COMMERCIALLY GROWN COTTONS OF PAKISTAN. PART 2. RESULTS OF 1958-59 CROP. I. Afzal and M. A. Khan. Pakistan Inst. Cotton Research & Technol. Jan. 1961. 57 p. Technical Bull. Series A No. 3. Pakistan Cottons 5: 57-113 (Jan. 1961). (2861)

PRELIMINARY OBSERVATIONS ON THE CHARACTER OF NEPPINESS IN COTTON IN SO FAR AS IT RELATES TO FIBER NEPS. L. R. Jambunathan. Indian Cotton Growing Rev. 13: 296-301 (July 1959).
The following conclusions were drawn from the results: (1) there is a wide variation in the nep contents of different plants within the same family, as well as between different families; (2) neppiness does not appear to be correlated with fiber length and fiber weight per inch; and (3) neppiness is negatively correlated with the fiber maturity. 8 refs. (2862)

REDUCTION OF NEPS IN STANDARD INDIAN COTTONS. R. L. N. Iyengar and K. P. R. Pillay. Indian Cotton Growing Rev. 13: 403-408 (Sept. 1959).
The promising results achieved with this laboratory program of selective breeding indicated that even better results could be achieved if large scale breeding, testing of the produce, and selection of plants are carried out in the field itself. 6 refs. (2863)

FIBER YIELDING WEEDS OF BOMBAY AND ITS SUBURBS. PART 5. (a) URENA LOBATA LIN., (b) TRIUMFETTA PILOSA ROTH. S. M. Betrabet and B. S. Navalkar. Indian Textile J. 71: 257-259 (Feb. 1961).
Chemical and physical properties were investigated for the purpose of finding a jute substitute. 9 refs. For part 4, see abstr. 3035/60. (2864)

WOOL BUYING: THE MOISTURE FACTOR. C. Trenblay (Ayers Ltd). Can. Textile J. 78: 59-61 (May 26, 1961).
Comparative cost figures resulting from the purchase of carbonized and scoured wool on an "as received" versus on a conditioned basis are given to illustrate the advantages of the latter. (2865)

FIBER CONTOUR IN NORMAL AND DOGGY WOOL. G. Jones and W. R. Lang (Gordon Inst. Technol., Australia). (Letter to the editor). J. Textile Inst. 52: T195-T196 (Apr. 1961). (2866)

MORPHOLOGY OF THE CUTICLE LAYER IN WOOL FIBERS AND OTHER ANIMAL HAIRS. M. G. Dobb, F. R. Johnston, J. A. Nott, L. Oster, J. Sikorski, and W. S. Simpson (Leeds Univ.). J. Textile Inst. 52: T153-T170 (Apr. 1961).
From electron studies made of surface replicas, fiber profiles, and thin sections, an idealized model of the cuticle cell emerges. It could account for the two distinctly different mechanisms of deformation, namely buckling and compression, under forces acting in the direction of fiber-root and fiber-tip respectively. Evidence was obtained providing further, if not conclusive, proof of the "ploughing" action, operative during motion in the tip-to-root direction. 32 refs. (2867)

TORSIONAL PROPERTIES OF SINGLE WOOL FIBERS. PART 2. M. Feughelman and T. W. Mitchell (C.S.I.R.O. Wool Research Labs.). Textile Research J. 31: 455-459 (May 1961).
Torque-twist and torsional relaxation tests on single wool fibers in water over the temperature range 7° C to 44° C show a rapid change with temperature. This change indicates that torsional properties are dependent upon a rate process mechanism. In a previous paper (abstr. 4246/60) it was postulated that these properties can be explained in terms of a matrix in the wool fiber acting as a cross-linked polymer stabilized by a network of polar bonds. The drastic change in torsional properties of the wool fibers when the pH is changed from ~ 6.5 to 1.0 indicated that some of the bonds are salt-linkages: others will be hydrogen bonds. However, it is pointed out on the basis of the proposed model, that whereas the hydrogen bonds in the network can break and remake during mechanical deformation of the fiber, the salt-linkages on breaking apparently do not remake. 5 refs. (2868)

REPORT OF THE DIRECTOR OF RESEARCH FOR 1960. Wool Inds. Research Assoc. Leeds, England. Feb. 1961. 39 p. WIRA pub. no. 215.
Research for 1960 at the Wool Industries Research Assoc. is reviewed under the headings: scouring and combing, woolen carding and spinning, worsted drawing and spinning, weaving, cloth consulting, technical chemistry, technical survey, Scottish Branch Laboratory, testing, mathematics and statistics, biology, chemistry, and physics. A bibliography of WIRA publications is included. (2869)

Manmade fibers A2

NEW FIBER DEVELOPMENTS. C. E. Coke (Hartford Fibers Co.). Can. Textile J. 78: 39-44 (June 9, 1961).
The origin and growth of the manmade fiber industry over the past 60 years are briefly reviewed. (2870)

EFFECT OF ELONGATION AND TEMPERATURE ON THE RECOVERY AND APPARENT GLASS TRANSITION BEHAVIOR OF AN EXPERIMENTAL MODACRYLIC FIBER. G. M. Bryant (Union Carbide Chem. Co.). Textile Research J. 31: 399-409 (May 1961).
The present paper combines two earlier approaches by extending recovery-temperature measurements to include a range of elongations up to 10%. Measurements of stress, stress relaxation, and recovery as a function of elongation are also presented and correlated at several temperatures. From a consideration of all of these results, a new interpretation of the stress-strain curve is postulated, based on a lowering of the glass transition temperature of the fiber as stretching occurs. The results of the present paper were obtained on an experimental modacrylic fiber containing 70% acrylonitrile. 19 refs. (2871)

DEPENDENCE OF THERMO-MECHANICAL PROPERTIES OF POLYPROPYLENE UPON ITS STRUCTURAL COMPOSITION. M. P. Zverev, V. S. Klimenkov, and T. F. Kostina. Vysokomol. Soed. 2, No. 11: 1620-1624 (1960). In Russian. Through BCIRA 41: 506 (1961).
The mechanical properties of polypropylene fibers were examined after stretching them by 300% over a wide range of temperatures at a drawing rate of 0.3 mm/sec. The stretched fibers were tested at a deformation rate of 0.026 mm/sec and 30° C. It was found that the maximum elasticity modulus is reached on drawing at 100-110° C and that, in the presence of atactic fractions, the elastic properties of the isotactic propylene increase. It is assumed that the drawing of polypropylene fibers with atactic structures is associated not only with the recrystallization process but also with displacement of the crystals without appreciable deformation. (2872)

POLYOLEFINS IN TEXTILES. W. Henstead (Brit. Celanese Ltd). J. Textile Inst. 52: P158-P168 (Apr. 1961).
The chemistry of the polyolefins, fiber manufacture, yarn properties, and textile applications are reviewed. (2873)

PRODUCING SILON POLYAMIDE FIBER IN CZECHOSLOVAKIA. V. Diba (Silon Nat. Corp.). Man-Made Textiles 38: 45-48 (May 1961).
The special short process for producing Silon is characterized by simple polymerization in small vessels, combined continuously with the spinning and drawing operation. The production sequence is described in detail. 8 refs. (2874)

NEW OUTLETS FOR MANMADE FIBER YARNS AND FABRICS IN INDUSTRY, HOME, AND MEDICINE. J. Boyd (Courtaulds Ltd). Textile Weekly 61 (1): 1057-1058, 1060 (May 5, 1961). (2875)

NEW USES OF MANMADE FIBERS IN APPAREL FABRICS. G. Solomon. Modern Textiles Mag. 42: 49-56 (June 1961). (2876)

NEW SPINNING PROCESSES IN THE VISCOSE INDUSTRY ESPECIALLY FOR THE PRODUCTION OF FIBERS WITH SPECIAL PROPERTIES. W. Bandel. Melliand Textilber. 42, No. 2: 185-193 (1961). In German. Through BCIRA 41: 1406 (1961).
New developments in the viscose industry are reviewed, with special reference to the production and properties of Floxan and Flox H fibers, Toramomen fibers (Tachikawa process), polynosic fiber Z, and highly-crimped viscose fibers. (2877)

YARN PRODUCTION B

WATER SOLUBLE FIBER LUBRICANTS. A. L. Barber. Fibres and Plastics 22: 132-134 (May 1961).
The advantages and problems associated with the use of water-based lubricants are examined, and the properties of the three most promising types, triethylene glycol, dipotassium phosphate, and sodium lactate, are described. (2878)

REPORT OF DISCUSSIONS OF QUESTIONS ON OPENING, PICKING, CARDING, AND SPINNING. Textile Operating Executives of Georgia. Atlanta, Ga. 1961. 16 p.
The following are discussed: crop comparison, SRRL opener, blender, and cleaner, automatic opener and blender, long pneumatic lap control system, Cros-Rol device, Japanese model D supercarding device, metallic card clothing, high speed drawing, Vari-pitch roving frame builder, high speed flyers, revolving clearers, spiral fluted steel rolls, overhead traveling cleaners, Eureka half laps, traveling floor cleaner, Duo-Roth drafting, Piedmont spinning, spindle brakes, top drive spindles, spinning tapes, Magna-draft changeover, cost of spinning supplies, spinner's duties, creeling, BC spoolers, and quality control in opening and picking, carding, combing, and spooling. (2879)

ELIMINATION OF UNNECESSARY COTTON WASTE. R. A. Hudson. Am. Textile Reptr. 75: 73-74 (May 18, 1961).
The use of the Shirley analyzer for determining unnecessary waste is explained, and the use of improved opening and picking techniques for reducing the latter is described. (2880)

MANMADE FIBER RECOVERY. Brit. Man-Made Waste Fibres Ltd. Man-Made Textiles 38: 42-43 (May 1961).
Mill sorting and processing techniques are outlined. (2881)

Opening, picking, fiber preparation B1

LATTICES FOR TEXTILE MACHINES. German Standards Comm. Melliand Textilber. 42, No. 2: 162-163 (1961). In German. Through BCIRA 41: 1424 (1961).
The draft specifications DIN 64 096 and 64 097 give the dimensions, material and design of lattices and lattice slats, respectively, for textile machinery (spiked lattices, transmission lattices, conveyors, etc.). (2882)

MODERN MIXING AND WILLOWING INSTALLATIONS. W. Rupert. Textil-Praxis 16, No. 1: 4-11; No. 2: 121-132 (1961). In German. Through BCIRA 41: 1423 (1961).
Nonautomatic, semiautomatic, and fully automatic processes and their respective machinery are reviewed, and the trends in development are pointed out. (2883)

Carding and combing B2

EFFECT OF THE DENSITY OF CARD CLOTHING ON THE CARDING PROCESS. T. W. G. Ashdown and P. P. Townend (Leeds Univ.). J. Textile Inst. 52: T171-T184 (Apr. 1961).
This paper concerns an investigation into the amount of carding performed by cylinders and their associated rollers clothed with wires ranging from diamond point (40/4/24) to 140/14/35. The materials used for the investigation consisted of 70s lambs' wool, 50s carpet wool, pulled velour shoddy, and 3-den. 2-1/2 in. Fibro. Carding was assessed in terms of fiber breakage, nep formation, thread content, and appearance of web. 6 refs. (2884)

FILLET TENSION DURING MOUNTING OF CARD CLOTHING. S. Bathelt. Melliand Textilber. 42, No. 2: 137-139 (1961). In German. Through BCIRA 41: 1426 (1961).
To ascertain whether and to what extent the wire density and thickness affect the friction between the card-mounting beam and the fillet and, consequently, the tension of the fillets during mounting, the fillet tension is determined by practical experiments and by calculation. The results are discussed. (2885)

INNOVATIONS AND IMPROVEMENTS IN COTTON CARDING. Bull. Inst. Textile France No. 90: 103-111 (Sept./Oct. 1960). In French. Through BCIRA 41: 1425 (1961).
New carding machine constructions are reviewed, with special reference to the Granular card, the Carminati-Zinser card, the Ohnishi Super carding engine, the small-cylinder card, the group of four cards with a one-can delivery, and the Crosrol carding device. Some advantages of modern cards are enumerated. (For previous part see abstr. 913/61.) (2886)

COMBING OF INDIAN AND AFRICAN (KAMPALA) COTTONS. V. V. Gupte and R. L. N. Iyengar. Indian Cotton Growing Rev. 14: 96-125 (Mar. 1960).
The present investigation was undertaken to compare the performance of some good quality Indian cottons under different combing treatments, with that of Kampala cotton. Changes in fiber and yarn properties brought about by combing were also examined from an economic point of view. Calculations for the cost of production showed that the combed stock from Indian cottons could be prepared in several cases, at an appreciably lower cost than the carded stock of imported Kampala cotton. The use of such Indian cottons, where combing machinery is available, is strongly indicated by these tests. 10 refs. (2887)

EFFECT OF COMBER LAP PREPARATION ON WASTE EXTRACTION AND PRODUCTION IN COMBING PROCESSES. S. K. Ghosh. Textile J. Australia 36: 169-171 (Feb. 20, 1961).
The results of mill trials on the Nasmith comber have indicated the advantages of 3 drawframe/lap former lap preparation and 1 drawframe/lap former lap preparation over the traditional system of sliver lap and ribbon/lap preparation. (2888)

Drawing and roving B3

TRIALS OF 3 DENIER 3-5 INCH NYLON STAPLE ON BRADFORD-TYPE OPEN DRAWING MACHINERY. Brit. Nylon Spinners Ltd. Advance Report No. 37. Apr. 1961. 8 p.
The aim of the trials was to obtain an indication of the optimum values of draft and ratch along a typical Bradford-type open drawing set of machinery. (2889)

OVERALL DESIGN OF A FRENCH DRAWING SET. P. Grosberg (Univ. Leeds). J. Textile Inst. 52: P168-P176 (Apr. 1961).
The main purpose of this paper is to describe a method of calculation which can be used to obtain the minimum number of drawing stages required to produce a known yarn from a known top on a French drawing set and, in addition, to calculate the best drafts and doublings necessary to achieve this result at each stage. (2890)

Spinning, winding, twisting B4

INVESTIGATIONS ON THE PERFORMANCE OF RING TRAVELERS ON SPINNING RINGS OF COTTON RING SPINNING MACHINES. O. König and H. Herdtle. Textil-Praxis 16, No. 1: 28-34; No. 2: 132-137 (1961). In German. Through BCIRA 41: 1428 (1961).
Accurate calculations are made of the heat discharged by the traveler. For previous part see abstr. 1910/61. (2891)

Yarns B5

EFFECT OF VISCOSE STAPLE FIBER PROPERTIES AND TWIST ON THE PROPERTIES OF YARN. A. K. Kiselev. A. I. Mizonova, and N. I. Manushkina. Tekhnol. Tekstil. Prom. No. 4 (17): 42-49 (1960). In Russian. Through BCIRA 41: 1262 (1961).
Experiments showed that an increased twist coefficient does not cause appreciable changes in the strength, count, and other yarn parameters. For the viscose staple fibers and twist ranges examined, no characteristic parabolic relationship, with a clearly expressed inflection point characteristic for the critical twist value, was observed between the yarn strength and twist. The yarn strength is determined by the structure and quality of the fiber, as well as by the yarn count (the lower the count the higher the strength). (2892)

MICROSCOPICAL OBSERVATIONS ON NYLON 6 FILAMENTS UNDERGOING PHOTODEGRADATION. K. Kato. J. Soc. Textile Cellulose Inds. Japan 17, No. 2: 139-143 (1961). In Japanese (English summary). Through BCIRA 41: 1490 (1961).
Procion Black HGS stains cross-sections of nylon 6 filaments that have been exposed in a Fade-o-meter; electron microscopy reveals a micro-fibrillar structure. The oxidative reaction is discussed. (2893)

EFFECT OF AN AIRBORNE SOIL ON THE PHOTOCHEMICAL DEGRADATION OF NYLON YARNS. M. A. Morris and B. W. Mitchell (Univ. California). (Letter to the editor). Textile Research J. 31: 488 (May 1961). (2894)

HOW TERYLENE IS BEING BULKED. Skinner's Silk & Rayon Record 35: 425-426 (May 1961).
An exclusive survey of the texturizing processes currently used for this polyester fiber. (2895)

RECENT TRENDS IN THE USE OF BULKED YARNS. B. C. Eggleston. Textile Mfr. 87: 208-209 (May 1961).
Survey of the ways in which bulked yarns are selected for the most suitable end-use, based on a consideration of their physical properties. (2896)

SOME OBSERVATIONS ON THE RELATIONSHIP BETWEEN MECHANICAL PROPERTIES AND SUB-MICROSCOPIC STRUCTURE OF CELLULOSIC TIRE CORDS. D. S. Jackson and A. Sandig (Courtaulds (Canada) Ltd). Textile Research J. 31: 421-428 (May 1961).
Recent improvements in tensile and fatigue properties of high tenacity cellulosic yarns are described, and attempts to relate those improvements to fine-structure parameters such as crystalline content, crystallite size, orientation, etc. are discussed. 20 refs. (2897)

STRENGTH-PRICE: CRUX OF TIRE CORD SELECTION. Man-Made Textiles 38: 36-39 (May 1961).
Results of research on the mechanism of tire cord fatigue (Fabric Research Lab.) and on factors affecting the resistance of casings to repeated stresses (Courtaulds Ltd) are summarized, and trends in tire cord construction to meet the increasing demand for stronger cords are discussed. (2898)

YARN CHARACTERISTICS AND FABRIC PROPERTIES. A. W. Bayes (Ashton Bros. & Co. Ltd). Textile Weekly 61 (1): 1037-1038, 1041-1042 (May 5, 1961).
The relationship between yarn count, twist, twist direction, uniformity, and blend composition and the properties of the resultant fabrics is examined. (2899)

MECHANICAL PROPERTIES OF YARNS AND FABRICS OBTAINED FROM COTTON/VISCOSE RAYON STAPLE BLENDS. Bull. Inst. Textile France No. 90: 49-71 (Sept./Oct. 1960). In French. Through BCIRA 41: 1498 (1961).
The relationships between the length, length uniformity, and strength of fibers and the mechanical characteristics of the yarns from cotton/spun-rayon blends were studied, and the effects of spun-rayon content and yarn twist on fabric strength examined. It is possible to predict yarn strength from fiber strength of the blend, taking into account, however, the difference in the length uniformity of the blended fibers. The cotton/spun-rayon yarns have a lower strength than the pure cotton yarns, but their appearance and regularity are better. Fabric strength decreases with increasing spun-rayon content; it is, however, possible to attain the same strength as in pure cotton fabrics for loosely woven fabrics from low-twist yarns. (2900)

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

TENSION IN VISCOSE AND NYLON YARNS DURING RUNNING. PART 4. EFFECT OF EXTERNAL FACTORS. M. Maeda and T. Yamaguti. J. Textile Machy. Soc. Japan 14, No. 2: 124-135 (1961). In Japanese (English summary). Through BCIRA 41: 1439 (1961).
Yarn tension in knitting and weaving is considered. Tension irregularity in preparatory processes affects the mean tension of a running yarn but has less effect on the amplitude. The operation and construction of a letoff motion are discussed. See abstr. 3079/60 for previous part. (2901)

WEAR OF VARIOUS TEXTILE GUIDE MATERIALS. PART 3. EFFECT OF YARN TENSION ON WEAR RATE. K. Fujino, K. Nakajima, and T. Inoue. J. Textile Machy. Soc. Japan 14, No. 2: 110-117 (1961). In Japanese (English summary). Through BCIRA 41: 1433 (1961).
The rate of wear of copper cylinders by a running yarn (cotton) was measured under various conditions of yarn tension. The relation with equivalent normal load is linear only below a certain critical value of the load, and wear is more noticeable on the oncoming side than on the outgoing side of the cylinder. These apparently anomalous results are explained by the effect of frictional heating, leading to softening and transfer of the cotton wax. See abstr. 76/60 for previous part. (2902)

Weaving C2

AIDS TO THE LOOMFIXER. Fibre and Fabric 114: 10, 12 (Apr. 1961).
Setting instructions for endless check straps and automatic No. 8 Roper letoff on the Draper X-2 loom are given. (2903)

AIDS TO THE LOOMFIXER. Fibre and Fabric 114: 10, 12 (May 1961).
The setting of the clutch fingers in the No. 8 dry disc clutch used in Draper X series looms and welding procedures for aluminum lay extrusions are described. (2904)

LOOMFIXER AND HIS JOB. PART 30. W. Westbrook. Textile Bull. 87: 64, 66 (June 1961).
Symptoms and correction of incorrectly aligned reeds are discussed. (2905)

DEVELOPMENT OF LOOMS. PARTS 1 AND 2. T. B. Vaswani. Silk Rayon Inds. India 4: 16-17 (Feb. 1961); 13-14 (Mar. 1961).
Historical survey of loom development. (2906)

STUDY ON JET LOOMS. PART 6. WEFT SPEED IN THE SHED. M. Uno, T. Ishida, K. Kimura, and T. Shinkai. J. Textile Machy. Soc. Japan 14, No. 2: 141-146 (1961). In Japanese (English summary). Through BCIRA 41: 1438 (1961).
An ac magnet and vibrator were used to measure the speed of marked weft propelled by air. The speed increases parabolically, reaching a maximum at a distance of 50-70 cm (47.5 m/s with a nozzle l/d = 5, d = 10 mm, at 2.2 ata; average 33 m/s). A thread guide placed 20 mm inside the nozzle outlet gives the highest maximum velocity. (2907)

NOISE CONTROL IN THE WEAVING SHED. W. Mezger. Textil-Praxis 16, No. 2: 154-156 (1961). In German. Through BCIRA 41: 1440 (1961).
Noise measurements on various modern looms and the effect of noise on the human organism are discussed, and the necessity of reducing the noise or protecting the workers is pointed out. (2908)

MODERN PREPARATORY AND WEAVING MACHINERY AND POSSIBLE TRENDS. P. J. Stucki (Rüti Machy. Works). Textile Weekly 61 (1): 1045-1050, 1084 (May 5, 1961); 1109-1116 (May 12, 1961).
Developments in warping and sizing machines and in looms (e.g. automatic control devices, automatic weft replenishment devices, bobbin containers) and their potential economic advantages for the textile manufacturer are examined. (2909)

INVESTMENT PROBLEMS IN SINGLE-SHUTTLE WEAVING. H. Kirchenberger. Melliand Textilber. 42, No. 2: 168-170 (1961). In German. Through BCIRA 41: 1441 (1961).
Economic aspects of the box loader, Unifil apparatus, and weaving machines, as compared with the circular battery, are examined, with special reference to the investment costs. (2910)

SHUTTLELESS WEAVING FOR GLASS FABRICS. C. Carter. Fibres and Plastics 22: 137-138 (May 1961).
Features and operation of the Onemack shuttleless loom, developed for the weaving of glass fabrics, are described. (2911)

FACTORS WHICH INFLUENCE SHUTTLE FLIGHT. T. Ramsbottom. Textile Mfr. 87: 180-184 (May 1961).
This article concerns an investigation into the size of warp shed in relation to reed displacement, when the shuttle is entering and leaving the shed, and the position of the warp shed line in relation to raceboard angle. (2912)

Knitting C3

GEOMETRY OF A KNITTED FABRIC IN ITS RELAXED CONDITION. D. L. Munden (Univ. Leeds). Hosiery Times 34: 43, 45 (Apr. 1961).
This paper discusses as a problem in static equilibrium the geometry of relaxed fabric. From these theoretical considerations it is possible to obtain relationships between relaxed fabric dimensions and fabric construction variables similar to those observed experimentally on relaxed knitted fabrics. (2913)

TWENTY YEARS OF DEVELOPMENT IN FULLY FASHIONED HOSE. PARTS 1 AND 2. R. W. Mills. Hosiery Times 33: 30-33 (Aug. 1960); 55, 57 (Nov. 1960). (2914)

ADVANTAGES OF THE TARGET METHOD IN THE MANUFACTURE OF CIRCULAR HOSIERY. G. C. Battye. Hosiery Times 33: 67-71 (July 1960).
The "target method" is a summing up of how various new techniques can be incorporated into a radically revised system of ancillary operations in the manufacture of women's hosiery. Reference to it will help in deciding not only whether or not a new device is immediately useful, but what is likely to be its effect on related processes. (2915)

FUNDAMENTAL STRUCTURE OF KNITTED FABRICS. PART 4. QUALITY CONTROL INSTRUMENTS FOR THE HOSIERY INDUSTRY. D. L. Munden. Hosiery Times 33: 35-42 (Aug. 1960).
Development and operation of instruments for the measurement and control of stitch length in knitting are described. 8 refs. (2916)

STOP BLAMING YARN FOR SEAMLESS STOCKING LENGTH IRREGULARITY. J. C. Cobert. Hosiery Times 34: 61-63 (Apr. 1961).
The functions and advantages of the Volumet system of length control are explained. (2917)

SUPPORT STOCKINGS. PART 1. G. A. Urlaub. Modern Textiles Mag. 42: 38, 42-45 (June 1961).
With special attention to the new all-nylon types, this broad survey covers all types of therapeutic hosiery for women and men. Information on basic design and construction is included. (2918)

MONOTUBE SUCTION TAKEDOWN FOR CIRCULAR HOSIERY MACHINES. Lodge & Wallis Ltd. Hosiery Times 33: 65 (July 1960). (2919)

PRACTICAL HINTS FOR KNITTERS AND KNITTER-MECHANICS. PART 7. FULL-FASHIONED HOSE MACHINES. Hosiery Trade J. 68: 124-125 (May 1961).
Pointers on cleaning, lubrication, and needle replacement are given, and sources of various types of knitting faults are noted. (2920)

MORETTA DR-2 TWIN-FEED SEAMLESS HOSE MACHINE. Hosiery Trade J. 68: 90-91 (May 1961).
The features described include the extra large control drum, positive yarn feed mechanism, and specially shaped holding down sinkers. (2921)

KNITTED FABRIC ANALYSIS: RACKED RIB EFFECTS. R. W. Mills. Hosiery Times 33: 41-42 (Sept. 1960). (2922)

BULKED NYLON KNITWEAR. J. B. Lancashire. Hosiery Times 34: 21-25 (Mar. 1961).
Practical hints on garment and fabric manufacture. (2923)

COLOR DESIGNS ON BACKED OUTERWEAR FABRIC. J. B. Lancashire. Hosiery Times 33: 57-58, 82 (July 1960). (2924)

SOME RECENT STUDIES OF THE KNITTED LOOP. G. A. V. Leaf (Hosiery & Allied Trades' Research Assoc.). Hosiery Trade J. 68: 100-101 (May 1961).
The construction of a model for studying the shape of the knitted loop and the forces and couples acting on it is briefly described. (2925)

MORE NOVEL ITALIAN FLAT FRAME FABRICS. Hosiery Trade J. 68: 129-130 (May 1961).
Further fabrics (see also abstr. 1473/61) are illustrated to indicate effects produced on Santogostino single system machines by exploiting color changing possibilities in combination with fancy set-outs of high and low butt needles which enable tucking and knitting or tucking, knitting, and missing to take place together. (2926)

FOCUS ON COLLARS. J. B. Lancashire. Hosiery Trade J. 68: 84-87 (May 1961).
The methods of collar shaping on V-type machines are discussed at length, and brief mention is made of the possibility of producing wale-fashioned collars on flat purl machines and on Cotton's type bearded needle rib machines. (2927)

WORK STUDY IN THE KNITTING ROOM. G. C. Battye (Meridian Ltd). Hosiery Trade J. 68: 102-106 (May 1961).
The detailed application of work measurement to a study of Bentley KL400 circular hosiery machines to determine operative workload is described. (2928)

BRITISH MACHINERY FOR KNITTING DOUBLE JERSEY. PART 2. J. B. Lancashire (Leicester Coll. Technol.). Knitted Outerwear Times 30: 7-8, 11 (May 22, 1961).
Features of the Stibbe PDBR/SMO, MAS, GS2, and 99/24 are described. (2929)

SOME PROBLEMS IN WARP KNITTING. W. T. Cowhig and G. B. Thomas (Brit. Rayon Research Assoc.). Hosiery Trade J. 68: 101-102 (May 1961).
Results of research carried out by Brit. Rayon Research Assoc. on the mechanism of stop line formation, causes of warpways stripes, and relationship between wet and dry relaxed structures are summarized. (2930)

GERMAN-BUILT CYLINDER AND DIAL MACHINES. Albert & Bitzer AG. Hosiery Times 33: 76, 89 (Aug. 1960).
Features of the following are briefly described: Albi-Combirib ROA rib/interlock; Albiquard-Jacquard ROMR pattern wheel machine; ROF fine rib machines; and ROJ interlock machines. (2931)

TECHNICAL FEATURES OF FOUQUET SMJ CIRCULAR JACQUARD MACHINE. Franz & Planck. Knitted Outerwear Times 30: 5-9, 31 (June 5, 1961). (2932)

PATTERN SCOPE OF FOUQUET SMJ CIRCULAR JACQUARD MACHINE. Franz & Planck. Knitted Outerwear Times 30: 5-9, 52-53 (June 12, 1961). (2933)

EUROPEAN KNITTING DIARY. R. Innes. Hosiery Trade J. 68: 108-110 (May 1961).
Among the developments described are: VEB 5602/8 open-top circular machine; Nuwub 5403 double system V-type machine; East German and 5606/2 interlock machine. (2934)

REVIEW OF KNITTING DEVELOPMENTS IN EUROPE. J. B. Lancashire. Knitter 25: 31-34 (Mar. 1961).
Among the developments described are: Kovo J4Da four-feed circular hosiery machine; Bentley-Cotton FR straight bar, bearded needle machine; Macqueen tailor-knitting machine; Trip-Tape positive yarn feed system; Stibbe-Berridge 553, Mayer Suprint II, Penelop purl, and Lebocey Emavit 44 circular machines; and Mayer Rotary Rapid machine. (2935)

FLAT KNITTING MACHINES. J. B. Lancashire. Hosiery Times 33: 23-27 (Oct. 1960).
This broad survey of modern types of flat knitting machines includes single-bed, V-type, double system, strapping, four-bed, flat-purl, and three-bed machines. (2936)

WEIFFENBACH MVA AUTOMATIC V-BED FLAT MACHINE. Hosiery Times 34: 25, 27 (Mar. 1961).
It is claimed that the machine can operate at knitting speeds up to 40 courses/min on the standard width of 160 cm, and, in addition to fabricating collars and rib trimmings, the machine can be utilized to knit outerwear garment parts with automatically inserted drawthread welts. (2937)

NEW FULL-FASHIONED OUTERWEAR FRAMES. C. Reichman. Knitted Outerwear Times 30: 3, 5 (May 22, 1961).
Features of the Philip transfer rib and jersey spring needle machine and the Bentley FR continuous rib body and sleeve blank machine are described. (2938)

SPEEDING UP THE LINKING OPERATION. R. W. Mills. Hosiery Times 33: 28-30, 35 (Oct. 1960).
The advantages and use of the Mathbirk pedestal linking stand and the Beck compound loop spreader are described. (2939)

MODERN KNITTING MACHINES IN THE LEBOCEY RANGE. R. W. Mills. Hosiery Times 34: 41, 45-48 (Feb. 1961).
Features of the following are noted: TB57 beret; Emavit 11, 221, 44, and 33 plain jersey; Octavit, Macdet, and Nopavit double jersey; Macbor interlock garment length; and TOPP pile fabric. (2940)

MACQUEEN TAILOR-KNITTING TECHNIQUE. J. T. Millington. Hosiery Trade J. 68: 97-100 (May 1961).
The basic principles of the technique and their practical application in the machine are described. (2941)

RECENT DEVELOPMENTS IN KNITTED OUTERWEAR MACHINES. E. Baines (Wildt Mellor Bromley Ltd). Hosiery Times 33: 51-59 (Aug. 1960).
The knitting machines discussed are divided into two groups: (1) machinery for the production of such garments as sweaters, pullovers, and cardigans, etc., and (2) machinery for the production of knitted fabric piecegoods by the yard suitable for being made up into suits, coats, and dresses, etc. (2942)

WALTEX MACHINE TWF/160. Hosiery Trade J. 68: 131 (May 1961).
Features of this newly modified unconventional machine for making looped fabrics (see abstr. 3179/57) are briefly noted. (2943)

KNITTING ARTS EXHIBITION EQUIPMENT DEVELOPMENTS: WARP KNITTING AND WARPING MACHINERY. A. Reisfeld. Knitted Outerwear Times 30: 5, 34-35 (May 29, 1961).
Features of the following are described: Liba Excentra 2 and 3 bar tricot units; Mayer 2-bar Super Rapid tricot machine; Mayer raschel machine; Cocker SB warper; and Mayer SG warper. (2944)

JACQUARD-CONTROLLED RASCHEL CURTAIN MACHINE. Industriewerk Schauenstein. Hosiery Times 33: 47-48 (Nov. 1960).
This translation of an article from Wirkerei und Strickerei, supplied by G. E. McPherson, deals with a new jacquard-controlled raschel (bearded-needle) curtain machine, which works, instead of with harness cords, with plastic jacquard bars. The slots in the bars, according to whether they are filled or empty, control the patterning. The number of bars, extending over the whole working width of the machine and joined together to form an endless chain, depends on the repeat length of the pattern being worked. The machine operates with one basic guide-bar and two jacquard guide-bars. (2945)

Fabrics C4

SILK/TERYLENE BLENDS. Skinner's Silk & Rayon Record 35: 428 (May 1961).
The types of Terylene/silk blends so far developed and their properties and processing are briefly described. (2946)

WHY DO WOMEN SHIVER IN A WARM ROOM? W. Schweisheimer. Hosiery Times 34: 59, 61 (Feb. 1961).
The differences of comfort standards between men and women are primarily due to differences in dress, not to differences in the constitution of the sexes. The effects of the number of clothing layers, fiber conductivity, fabric construction, and color on comfort standards are briefly discussed. (2947)

WOVEN CARPET. PART 16. PREPARATION OF THE YARNS. H. Osswald. Melliand Textilber. 42, No. 2: 170-173 (1961). In German. Through BCIRA 41: 1442 (1961).
Preparation of warp, pile and weft yarns is discussed, with reference to special machines and equipment. For previous part see abstr. 1005/61. (2948)

MANMADE FIBERS, FABRIC, AND GARMENTS: A REVIEW. P. van Gehuchtan. Can. Textile J. 78: 63-71 (May 26, 1961).
This paper provides an extensive review ranging from garments of early man, through the development of manmade fibers, as well as projecting into the future possibility of molded and disposable garments. (2949)

CLOTHING THE NEW MIDDLE CLASS. W. A. Slow. Hosiery Times 34: 59, 61 (Jan. 1961).
Pointers are given on marketing approaches in the promotion of new fibers. (2950)

BLENDING COTTONS DIFFERING IN FIBER BUNDLE BREAK ELONGATION. PART 2. EFFECT ON PROPERTIES OF A COMBED BROADCLOTH. G. L. Louis, L. A. Fiori, and J. E. Sands (So. Reg. Research Lab.). Textile Research J. 31: 478-483 (May 1961).
Two control cottons, differing in fiber bundle break elongation, but having other pertinent fiber properties essentially equal, were blended in different percentages, spun into warp and filling yarns, woven into a standard combed broadcloth, and then finished commercially. This report discusses the physical properties of these fabrics. Data also indicate that the values of fabric properties of the blended lots cannot be predicted from those of the controls when the fabrics are subjected to various chemical treatments. This report corroborates other findings that no apparent advantage, from the standpoint of textile quality, exists in blending low and high elongation fibers--whether in blends of natural-natural or natural-synthetic fibers. 6 refs. (2951)

EFFECTS OF OXALIC FERRATES ADSORBED BY NYLON FIBERS. T. Hikota. J. Soc. Textile Cellulose Inds. Japan 17, No. 2: 190-192 (1961). In Japanese (English summary). Through BCIRA 41: 1491 (1961).
When oxalic acid solution is used to remove rust stains from nylon, the ferrous and ferric oxalates are readsorbed by the fiber, particularly at higher temperatures and near pH 7, causing discoloration and embrittlement. (2952)

WOVEN STRETCH. J. H. Hamilton (Madison Throwing Co.). Modern Textiles Mag. 42: 57-60 (June 1961).
The potentials and problems in weaving and merchandising woven stretch fabrics are reviewed. (2953)

ENDEDNESS IN WORSTED PIECES. Fibre and Fabric 114: 4-5 (Apr. 1961).
The variation in shade of two ends of a piece, known as ended pieces, is undoubtedly a product of the steaming, crabbing, and dyeing operations. Precautions to be taken in these operations to avoid the defect are discussed. (2954)

FIBER/RESIN PIPES FOR HIGH PRESSURE USE. Fibres and Plastics 22: 131 (May 1961).
A pipe system, in which the pipes are built up from epoxide resin-impregnated glass fiber rovings wound onto a pre-heated mandrel, is described. (2955)

CONTRIBUTION OF SWELLING TO WATER-RESISTANT COTTON FABRICS: EFFECTS OF MATURITY OF COTTON, CLOTH CONSTRUCTION, AND FINISHING PROCESSES. C. F. Goldthwait and W. G. Sloan (So. Reg. Research Lab.). Textile Research J. 31: 434-446 (May 1961).
A summary of a comprehensive study of the manufacture and finishing of swelling-type water-resistant cotton fabrics of medium weight is presented. These are fabrics which stop the passage of water by the swelling of their constituent fibers. Variables studied included maturity, and use of very immature cottons; effects of processing the yarn before weaving; and effects of increasing the tightness of fabrics by adding picks up to 36% more than normal. The fabrics were finished in a pilot plant, and an unusual study was made of the effects of successive steps in finishing on air and water resistance. Many special tests showed that swelling capacity was reduced by finishing, to a greater extent with immature than with mature cottons. The air spaces in dense, gray fabrics of very immature cotton constitute capillary systems of unusually fine pores, especially resistant to the passage of air or water. This advantage over mature cotton is largely offset, however, because the immature cotton loses 4-5% more noncellulosic material when scoured, which leaves more space to fill by swelling. Entrapped air in partially swollen fabrics contributed to water resistance beyond the effect of air in ordinary water-repellent goods. 12 refs. (2956)

DRAFTED STYLES FOR LADIES' COATINGS. Textile Mfr. 87: 173-175 (May 1961).
By the use of warp and weft faced weaves together, and with certain warp ends working as key threads, arranged in regular order, and weaving with a minimum number of shafts to form the ground of the pattern, it is possible to produce very elaborate designs on dobby looms. (2957)

FILTER PRESSES. Poly-Fibre Associates. Ind. Eng. Chem. 53: 32A, 35A (May 1961).
Lightweight polyester frames, reinforced with glass roving, give high strength and corrosion resistance. (2958)

FOAM: AN EXTRA "HAND" FOR VINYL-COATED FABRICS. Modern Plastics 38: 162-164, 303 (May 1961).
Vinyl foam-coated fabrics are in essence a 3-ply sandwich: fabric backing, foamed vinyl core, and straight vinyl skin. The lower density of the core results in a greater bulk-per-unit-of-weight factor and gives better drape and feel than conventional vinyl-coated fabric. The preparation of the fabrics by calendering and by casting is described, and their versatility and potential end-uses are discussed. (2959)

FOAMED VINYL SHEETING. U. S. Rubber Co. Ind. Eng. Chem. 53: 28A, 30A (May 1961).
Vinyl chloride sheets containing azodicarbonamide as the blowing agent are laminated onto a fabric backing. Oven-heating the solid laminate 2 to 4 min then expands the resin sheet 300 to 400% to give a soft, pliable closed-cell structure with a continuous skin. Azodicarbonamide produces 367 volumes of colorless, odorless, nonsensitive gas--65% nitrogen, 32% carbon monoxide, 3% carbon dioxide. (2960)

APPLICATION OF COMPOUND LATEX TO HIGH PILE KNITTED FABRIC. E. J. P. Reynolds and B. P. Bester (Rubber Latex Ltd). Hosiery Trade J. 68: 136-137 (May 1961).
The advantages of spreading for latex application to knit fabrics are noted, and the process is briefly described. (2961)

ADSORPTION OF POLYMERS ON GLASS AND OTHER SUBSTRATES. PART 2. R. R. Stromberg and G. M. Kline. Modern Plastics 38: 241-245, 353, 356 (May 1961).
The following factors are considered in relation to their effect on the adsorption behavior of polymers onto glass, silica, alumina, and other adsorbents: (1) temperature; (2) adsorption-desorption reversibility; and (3) configuration of the adsorbate molecule. Theoretical expressions derived to account for adsorption behavior of polymers and their significance in practice are discussed. For part 1 see abstr. 2015/61. 5 refs. (2962)

ETHYLENE-PROPYLENE RUBBER. L. O. Amberg and A. E. Robinson (Hercules Powder Co.). Ind. Eng. Chem. 53: 368-370 (May 1961).
The data indicate that ethylene-propylene rubber has inherent superiority in ozone and weathering resistance; resistance to deterioration at normal and moderately high temperatures; chemical inertness; light color and resistance to discoloration; resistance to soiling; and abrasion resistance. Potential uses are summarized. 6 refs. (2963)

SHRINKAGE OF MANMADE FIBER FABRICS. PART 2. M. T. Mehta. Silk Rayon Inds. India 4: 10 (Feb. 1961).
The percentage shrinkage in acetate taffeta and nylon fabrics is reported. See abstr. 2013/61 for Part 1. (2964)

CONSIDERATIONS IN CALCULATING FABRIC WEIGHT. E. B. Berry. Textile Bull. 87: 50-54 (June 1961).
Weight calculations for the striped chambray fabric discussed in abstrs. 2005/61 and 2454/61. (2965)

WORK STUDY IN A WOOLEN MILL MENDING DEPARTMENT. Textile Mfr. 87: 179, 184 (May 1961).
This report contains proposals for applying a production bonus scheme to replace the fixed piece rate per piece mended. An average work value is allocated per piece for handling, knotting, and perching. For the purposes of assessing work value, each separate warp end down, or pick broken or missing, is considered one mend. (2966)

FINISHING D

Chemical processes D1

BLEACHING ACRILAN 16/COTTON BLENDS. Chemstrand Corp., Decatur, Ala. Apr. 1961. 3 p. Bull. no. DF-16.
The new bleach for Acrilan 16/cotton blends involves the use of two bleaching agents and two optical brighteners which, in combination, give an excellent white. The two bleaching agents are Atco Chlorite and Atcosel (Metro Atlantic Corp.). The two optical brighteners are Tinopal ACA liquid for the Acrilan 16 component and Tinopal 4 BMA for the cotton component (Geigy Dyestuffs). (2967)

VARIABLES IN HYDROGEN PEROXIDE BLEACHING OF COTTON. H. L. Martin (Du Pont of Canada Ltd). Can. Textile J. 78: 42-44 (May 12, 1961).
The variables to be considered in peroxide bleaching, how these variables are interrelated, and how the increased knowledge of each one have made possible recent improvements in overall bleaching techniques are discussed. (2968)

BLEACHING WITH SODIUM CHLORITE. J. F. Barton (Ind. Dyestuffs Ltd). Textile Mfr. 87: 205-207 (May 1961).
Points dealt with include: types of machinery used; open width systems; rope bleaching cotton piece-goods; winch bleaching knitted fabrics; bleaching nylon and Terylene; bleaching efficiencies and control of pH. (2969)

PRETREATMENT INSTALLATION FOR DESIZING, SCOURING, AND BLEACHING. R. B. Vogel and W. Neumann. Textil-Praxis 16, No. 2: 160-161 (1961). In German. Through BCIRA 41: 1454 (1961).
A pretreatment installation (Maschinenfabrik Gerber, Krefeld) is described. The main component is a pretreatment jig (impregnating machine) whose essential feature consists in the potential use of the thermobatching (Thermo-verweil) process, permitting the removal of the takeup rollers with the rolled-up cloth without rewinding and the placing of them in the so-called batching chambers. This is of particular advantage when small batches are treated. (2970)

APPLICATION PRINCIPLES OF ACRYLIC BACKCOATING. C. E. Hoey (Rohm & Haas Co.). Am. Dyestuff Reptr. 50: P410-P414 (May 29, 1961).
The characteristics of acrylic resins which make them particularly suitable for backcoating applications are discussed, and their use for upholstery fabrics, carpeting, and apparel fabrics is described. 4 refs. (2971)

PRESENT DAY RESEARCHES IN THE CHEMICAL MODIFICATION OF COTTON. S. M. Nawaz (Pakistan Inst. Cotton Research & Technol.). Pakistan Cottons 5: 115-122 (Jan. 1961). (2972)

REACTION OF DIMETHYLOL UREA WITH COTTON. R. Steele (Rohm & Haas Co.). (Letter to the editor). Textile Research J. 31: 489 (May 1961).
The author questions the data presented in abstr. 3562/60 on the basis of their procedure in the determination of methylol formaldehyde. (2973)

FORMAMIDE-FORMALDEHYDE PRODUCTS AS WRINKLE-RESISTANCE FINISHING AGENTS FOR COTTON FABRICS. S. L. Vail, J. G. Frick, Jr., P. J. Murphy, Jr., and J. D. Reid (So. Reg. Research Lab.). Am. Dyestuff Reptr. 50: 437-440, 464 (June 12, 1961).
Wrinkle-resistant cotton fabrics have been prepared by application of formamide-formaldehyde reaction products, believed to be methylolformamides. The finish produced is stable toward both acidic and alkaline conditions, but is susceptible to damage from hypochlorite bleaches. It is suggested that crosslinks through both formaldehyde and dimethylolformamide are responsible for the wrinkle-resistant properties. Formamide is also bound as a cellulose amidomethyl ether, but not part of a crosslink. 19 refs. (2974)

EFFECTS OF SOFTENERS ON THERMOPLASTIC RESINS. F. Magnussen (Can. Celanese Ltd). Can. Textile J. 78: 37-40 (May 12, 1961).
The alteration in physical properties occurring on a 150 denier secondary acetate lining fabric when finished with four different thermoplastic resins in combination with seven types of softeners were investigated. It was found that very different physical properties are obtained when different softeners are used with thermoplastic resins, and that it is quite possible to upgrade fabric performance by correct choice of resin and amount of softener while still retaining a satisfactory hand or feel to the fabric. (2975)

STUDY OF HYPOCHLORITE-RESISTANT MELAMINE-TYPE FINISHES. S. L. Vail, J. G. Frick, Jr., and J. D. Reid (So. Reg. Research Lab.). Am. Dyestuff Reptr. 50: 356-360 (May 15, 1961).
The cause of yellowing of creaseproof cotton fabrics treated with melamine-type agents has been attributed to the reaction of hypochlorite with primary amino groups in the finished fabric. Exclusion of these groups and elimination of the yellowing was accomplished by placing stable substituents, methyl or 2-hydroxyethyl groups, on each amino nitrogen of the s-triazine ring before reaction with formaldehyde. The properties of the fabrics treated with the formaldehyde reaction product of acetoguanamine, N, N-bis(2-hydroxyethyl) melamine, N, N'-dimethyl-N'', N''-bis-(2-hydroxyethyl) melamine and N, N', N''-trimethylmelamine are presented and compared with those of fabrics treated with some commercial methylolmelamines and methylated methylolmelamines. The preparation of these melamines and some of their properties are also described. 8 refs. (2976)

STUDY OF DELUSTERING AND RELUSTERING OF CELLULOSE ACETATE. G. Rivat, P. Rochas, and S. Pierret. Bull. Inst. Textile France No. 90: 25-37 (Sept./Oct. 1960). In French. Through BCIRA 41: 1476 (1961).
Study of the delustering and relustering mechanisms showed that the former is due to the formation of small cavities. Rearrangement of the macromolecules also takes place during delustering, the effects of this rearrangement varying according to the delustering agents used. Relustering is accompanied by new macromolecular rearrangement and disappearance of the cavities, the number of which reaches the value of the control samples. (2977)

RECENT DEVELOPMENTS IN THE WET PROCESSING OF TEXTILES. Silk Rayon Inds. India 4: 24-25 (Feb. 1961).
The following are briefly reviewed: methods of dyeing the various types of acrylic fibers; screen preparation for mechanical screen printing; theory and use of antistatic agents; cellulose waterproofing with Chromolan. 5 refs. (2978)

RECENT DEVELOPMENTS IN THE WET PROCESSING OF TEXTILES. Silk Rayon Inds. India 4: 18-19 (Mar. 1961).
The following are briefly reviewed: dyeing cellulose acetate with disperse dyes; automatic screen versus roller printing; veil-sprayed vinyl prints; Tricel finishing. 5 refs. (2979)

USE OF HETEROPOLY COMPOUNDS IN THE FIREPROOFING OF FABRICS. L. G. Beloborodova. Uchenye Zapiski Tomsk Univ. 34: 129-168 (1958). Summary in Chem. Abstr. 55: 5963a (1961).
Sodium heteropoly salts containing boron, phosphorus, and silicon as radicals were used. (2980)

MECHANISM OF RETENTION OF WET-STRENGTH RESINS. PART 3. RATE-CONTROLLING STEP IN THE RETENTION PROCESS. J. J. Becher, G. R. Hoffman, and J. W. Swanson. Tappi 44: 296-299 (Apr. 1961).
As a second stage in the study of the physicochemical mechanism of retention of wet-strength resins by cellulose fibers, the role of diffusion in the sorption process was examined. The adsorptions of melamine- and urea-formaldehyde resins were measured as a function of the degree of agitation of the fiber-resin slurry at several resin concentrations. (2981)

SOME PROBLEMS INVOLVED IN THE USE OF QUATERNARY AMMONIUM COMPOUNDS AS FABRIC DISINFECTANTS. E. McNeil, M. Greenstein, L. S. Stuart, and M. T. Goldsmith. Appl. Microbiol. 8: 156-159 (1960). Summary in Chem. Abstr. 55: 4972g (1961).
Gray cloth absorbed more than desized, and gauze more than muslin sheeting from dilute solutions. The bactericidal activity of the treated fabrics was examined. (2982)

NEW DU PONT CO. CHEMICAL RETARDS PILLING. C. Reichman. Knitted Outerwear Times 30: 3 (May 29, 1961).
The use of Baymal, a colloidal alumina, as a pilling retardant for knitwear of acrylic and natural fibers is described. Other possible uses are enumerated. (2983)

CHEMICALS FOR CROSS-LINKING. PART 2. A. J. Hall. Fibres and Plastics 22: 127-130, 134 (May 1961).
The desirable and undesirable effects associated with the use of cross-linking agents for cellulose finishing are considered. (2984)

STUDIES ON TEXTILE FINISHING AGENTS. PART 20. RESIN FINISHING OF CELLULOSIC FABRICS WITH EMULSION COPOLYMERS CONTAINING N-METHYLOLACRYLAMIDE AS A COMPONENT. H. Kamogawa, R. Murase, and T. Sekiya. J. Soc. Textile Cellulose Inds. Japan 17, No. 2: 183-189 (1961). In Japanese (English summary). Through BCIRA 41: 1473 (1961).
Changes in mechanical properties and durability to laundering of cotton and rayon fabrics finished with emulsion copolymers of N-methylolacrylamide and acrylic esters, including ethyl and butyl acrylates, were measured. (2985)

RECENT DEVELOPMENTS IN RESIN FINISHING. PART 1. M. J. Wadia. Silk Rayon Inds. India 4: 26-29 (Feb. 1961).
The principles, processes, and test methods involved in resin finishing are outlined. 12 refs. (2986)

RECENT DEVELOPMENTS IN RESIN FINISHING. PART 2. S. B. Mehta. Silk Rayon Inds. India 4: 20-25 (Mar. 1961).
The chemistry and properties of the resins used for wash-and-wear finishing of cellulose are discussed under the headings of nitrogenous and non-nitrogenous resins. In the former, creaseproofing efficiency varies from moderate to high, the cost is low, and no afterwash is needed. The latter, although free of chlorine retention, have relatively low efficiency and high cost. 11 refs. (2987)

LOCATION OF RESIN FINISH IN VISCOSE RAYON FABRICS. J. E. Ford (Shirley Inst.). Reply: G. S. Park (Courtaulds Ltd). (Letters to the editor). J. Soc. Dyers Colourists 77: 209-210 (May 1961).
The role of the skin-core structure of viscose in determining resin distribution as indicated by staining tests is discussed. (2988)

WATER-REPELLENT COMPLEX COMPOUNDS OF CHROMIUM. A. Süszer, A. Bader, J. Pilz, and E. Maurer. Chem. Tech. (Berlin) 12: 412-414 (1960). Summary in Chem. Abstr. 55: 4996-4997 (1961).
The production of fatty acid complexes is described: the acetate complex has the same effect as the corresponding chromic chloride complex. (2989)

EPOXIDE-SUBSTITUTED VINYL AND ACRYLATE COPOLYMERS. J. A. Simms (E. I. du Pont de Nemours & Co.). J. Appl. Polymer Sci. 5: 58-63 (Jan./Feb. 1961).
Polymers which are multifunctional in epoxide groups were synthesized by copolymerizing glycidyl methacrylate with acrylate and vinyl monomers. The copolymers can be crosslinked by the same classes of materials that are useful with conventional epoxide resins based on epichlorohydrin and bisphenol A. Similar curing conditions and reactant stoichiometry can also be used. These polymers have good resistance to yellowing because of their aliphatic hydrocarbon backbone. The molecular weight and epoxide functionality of the polymers can be varied over wide ranges. 6 refs. (2990)

VINYL PLASTICIZERS: SOLVATING POWER VERSUS STRUCTURE. W. J. Frissell. Modern Plastics 38: 232-238 (May 1961).
The minimum fluxing temperature test has been used to study the solvating power of a large number of commercial and experimental plasticizers. These data have been analyzed to determine the effects of various molecular structures on solvating power. Conclusions have been drawn concerning the relative importance of various structural groups. 6 refs. (2991)

COMPARATIVE WOOL SCOURING STUDIES. PART 1. YIELD AND REGAIN DIFFERENCES BETWEEN SOLVENT AND AQUEOUS METHODS. V. A. Williams (C. S. I. R. O. Wool Research Labs.). Textile Research J. 31: 472-477 (May 1961).
In laboratory trials on samples from individual fleeces solvent degreasing has shown a higher yield than aqueous alkaline scouring. Differences of 0.5% to 1.4% of clean dry fiber are found when solvent degreasing is compared with traditional soap-soda scouring. Evidence is presented showing that the difference in yield is due to dissolution of oxidized protein material from the tip portion of the wool fiber by hot alkaline scouring solutions. Regain of scoured wool at standard conditions is found to vary with the method of cleaning. Wool cleaned by solvent or neutral detergent has a lower regain than that from alkaline scouring. 34 refs. (2992)

SCOURING WOOLEN PIECEGOODS. Fibre and Fabric 114: 4-5 (May 1961).
Practical recommendations on pH control and prevention of residual alkalinity. (2993)

GLYCERYL MONOSTEARATE. COMPOSITION, PROPERTIES, AND USES OF THE COMMERCIALLY PURE MATERIAL. E. S. Lower. Soap, Perfumery & Cosmetics 33, No. 11: 1201-1205; No. 12: 1313-1316 (1960); 34, No. 1: 53-55 (1961). Reprint. Through BCIRA 41: 1472 (1961).
Textile applications, as a dressing and softening agent and as an additive to oils and crayons, are mentioned. (2994)

USING NYLON TO STOP WOOL FELTING. R. L. Wormell. Skinner's Silk & Rayon Record 35: 427-428 (May 1961).
In the recently developed polyamide method the fibers are first soaked in a cold aqueous solution of hexamethylene diamine. The surplus diamine is removed by washing the fibers in a dispersion of aqueous detergent in liquid paraffin, and the paraffin and aqueous phases are separated by the use of a high-speed centrifuge. The wool fibers are transferred to another bath of liquid paraffin containing 1-2% of sebacyl chloride and a thin film of nylon forms over the surface of each fiber. (2995)

DEVELOPMENTS IN THE USE AND PRODUCTION OF TEXTILE AUXILIARIES. B. C. M. Dorset. Textile Mfr. 87: 195-200 (May 1961).
Among the developments discussed are: heat resistant gas fading inhibitors for triacetate fibers (BP 853 430 and 792 237); dye leveling and stripping agents (BP 852 548); cationic dispersing agents for deep dyeing Orlon with disperse dyes (BP 853 217); ethylene diamine treatment of cellulose for wet crease resistance (BP 852 962); the addition of ultraviolet light absorbing agents to dyebaths for polyester fibers (BP 852 977); formaldehyde dihydrazide condensates as creaseproofing agents (USP 2 904 388); supercontraction of wool with dimethyl sulfoxide; fast-to-washing antistatic agents (BP 854 381). (2996)

HUNGARIAN HIGH PRESSURE PROCESS FOR DETERGENT MANUFACTURE. A. A. Zilahi. Man-Made Textiles 38: 51-52 (May 1961). (2997)

SILICONE OR PARAFFIN IMPREGNATION? U. Rall. Melliand Textilber. 42, No. 2: 212-215 (1961). In German. Through BCIRA 41: 1478 (1961).
Comparative impregnations with silicone and paraffin emulsions of various prewashed fabric types gave the following results: on cotton, the effects obtained with both types were approximately the same. Combination with a resin precondensate of the melamine type led in both cases to maximum water-repellency, the silicone finish being only superior as regards fabric handle. On wool and silk, best results were obtained with the silicone emulsion. On synthetic fibers, 40-50 g/l silicone emulsion gave maximum effects. Paraffin emulsion B on Perlon and Trevira fabrics resulted in water-uptake values of 20% or below (Bundesmann); it had no effect on Dralon. No improvement was obtained by the addition of resin precondensates. On fabric blends, maximum values were obtained with 60-80 g/l silicone emulsion. (2998)

INTRODUCTION OF VINYL GROUPS INTO WOOL FIBER. L. A. Miller and R. E. Whitfield (Western Reg. Research Lab.). Textile Research J. 31: 451-455 (May 1961).
Vinylated wools have been prepared by reaction of wool with acrylyl chloride, maleic anhydride, N-carbamyl maleimide, ethyl acrylate, and glycidyl methacrylate. By varying times, temperature, and solvent and reagent concentration, the degree of vinylation and the location of the vinyl groups in the wool can be controlled. With fiber-swelling solvents, such as water, acetic acid, and dimethylformamide, the reaction probably occurs throughout the entire fiber. With nonswelling solvents, reaction is assumed to be limited to the fiber surface. Both surface-vinylated wool and wool vinylated throughout the fiber are of interest for use in graft polymer formation. 4 refs. (2999)

TREATMENT OF WOOL WITH CHLOROSULFONATED POLYETHYLENE. R. E. Whitfield (Western Reg. Research Lab.). Textile Research J. 31: 446-451 (May 1961).
This investigation was undertaken to determine whether the polymer could be anchored to wool without the use of fixative agents and to examine some of the chemical and physical properties of the modified wool. It was found possible to graft the polymers by curing at 130-150° C for 6-24 hr. Although deposition of the resin on wool without grafting gives treated fabric with good resistance to shrinkage, durability of the resin finish to laundering, and good resistance to aqueous solvents, grafting is necessary to give durability of the treatment to drycleaning. 11 refs. (3000)

INTERFACIAL TENSION IN GENERAL AND IN THE TEXTILE FIELD IN PARTICULAR. G. Schwen. Melliand Textilber. 42, No. 2: 216-221 (1961). In German. Through BCIRA 41: 1453 (1961).
A description is given of the physical properties of interfaces and the effect of interface-active substances, and methods for measuring the forces acting at interfaces and for determining the effectiveness of interface-active substances are reviewed, with special reference to those of interest for the textile industry (washing power, wetting of textiles, etc.). (3001)

Dyeing and printing D2

STUDIES ON THE DYEING OF ACRYLONITRILE FIBER. PART 5. DECOMPOSITION OF ACID MONOAZO DYE IN DYEING BY THE CUPROUS ION TECHNIQUE. Y. Takase. PART 6. EFFECTS OF SURFACE-ACTIVE AGENTS ON ABSORPTION OF ACID DYE. Y. Takase and Y. Kojima. J. Soc. Textile Cellulose Inds. Japan 17, No. 2: 162-171 (1961). In Japanese (English summary). Through BCIRA 41: 1468 (1961).
The number of sulfonic acid groups and their position in the dye molecule have a large effect on the rate of reaction. The retarding effect of surface-active agents on absorption of acid dyes is discussed. (3002)

SIMPLIFIED DYEING OF HIGH-BULK DRALON AND ORLON YARNS. W. Hentschke. Textil-Praxis 16, No. 2: 164-165 (1961). In German. Through BCIRA 41: 1469 (1961).
The methods described make it possible to dye Dralon and Orlon high-bulk yarns with disperse dyes in light shades and with basic dyes in medium and dark shades without preliminary washing and preshrinking. (3003)

PIECE DYEING SAYELLE IN DARK SHADES. C. Reichman. Knitted Outerwear Times 30: 3, 30 (June 5, 1961).
By the introduction of a pressure steaming step it is now possible to use the strip or sweater dyeing route for dark shades without loss of bulk or elasticity. (3004)

DYEING AND FINISHING OF ACRILAN AND OF BLENDED FABRICS OF ACRILAN AND WOOL. R. J. Schuster (Chemstrand Corp.). Am. Dyestuff Reptr. 50: P442-P444, P450 (June 12, 1961).
Practical procedures for preparing Acrilan 16, Acrilan 1656, and their blends with wool are outlined. (3005)

DYEING ZEFRAN ACRYLIC FIBER IN BLENDS. F. M. Rawicz (Dow Chem. Co.). Am. Dyestuff Reptr. 50: P415-P419 (May 29, 1961).
Typical procedures and formulations for dyeing Zefran blended with wool, cellulose, and polyester fibers are described. (3006)

COTTON TONE-ON-TONE EFFECT FABRICS. H. Baiertz. Textil-Praxis 16, No. 2: 161-164 (1961). In German. Through BCIRA 41: 1459 (1961).
Dyeing of these fabrics with selected direct dyes, and the possibilities of affecting their substantivity by temperature control and dye assistants, respectively, are discussed. (3007)

DYEING VISCOSE RAYON. Fibre and Fabric 114: 8-9 (May 1961).
Factors responsible for dyeing defects in viscose rayon yarns and fabrics are examined. (3008)

ALGINATE FIBER DYEING BEHAVIOR WITH COLD-DYEING REACTIVE DYES OF THE DICHLORTRIAZINE TYPE. H. M. Ulrich. Melliand Textilber. 42, No. 1: 81-85; No. 2: 205-209 (1961). In German. Through BCIRA 41: 1463 (1961).
Calcium alginate fiber reacts with cold-dyeing reactive dyes without addition of alkali, the alkali being formed in the fiber by gradual hydrolysis under the action of the penetrating dye liquor. Since alginic acid and its salts contain only secondary alcohol groups, cold-dyeing reactive dyes are also able to react with the latter. The dyeing behavior of calcium alginate fiber as compared with that of the benzoylated fiber indicates that the reactive dye forms a main-valency bond with the secondary alcohol group of the fiber. The sodium salt of alginic acid reacts with dichlortriazine dyes only in alkaline solution. (3009)

DYEING OF CAPRON WOVEN AND KNITTED FABRICS BY METAL-CONTAINING DISPERSE DYES. A. A. Kharkarov and E. E. Starikovich. Izvest. Vysshikh Ucheb. Zavedenii, Tekhnol. Legkoi Prom. No. 4: 121-129 (1960). Through Chem. Abstr. 55, No. 1: 998d (1961). (3010)

DYEING OF POLYAMIDES, ESPECIALLY CRIMPED YARNS, BY MEANS OF 2:1-METAL-COMPLEX DYES. J. Gadenne. Teinture et Apprets No. 59: 116-123 (Aug. 1960). In French. Through BCIRA 41: 449 (1961).
In this lecture, delivered in Lyon at the Dyeing and Printing Conference (May 1960), special reference is made to a new representative of 2:1-metal-complex dyes, called Amichrome Light, which is particularly suitable for dyeing polyamide fibers. (3011)

EFFECT OF CARRIERS ON THE MECHANICAL PROPERTIES OF POLYETHYLENE TEREPHTHALATE FIBERS. V. Bostik and Z. K. Jelinek. Chem. Prumysl 8: 445-446 (1958). Summary in Chem. Abstr. 55: 4969-4970 (1961).
Terylene (highly oriented) and Svitlene (less oriented) fibers dyed with disperse (Celliton) dyes were studied. Under practical dyeing conditions, the carriers did not affect the tensile strength, but they increased the extension at break. (3012)

DYEING OF VISCOSE FIBERS IN BULK. G. V. Saposnikov. Chem. Prumysl 8: 438-442 (1958). Summary in Chem. Abstr. 55: 4966-4967 (1961).
The action of Invadin I and Eryfor O, added to aqueous or viscose suspensions of pigments or vat dyes to prevent settling out, in decreasing the color intensity of the dyes was studied. (3013)

INDIGOSOL DYES FOR DYEING VISCOSE FABRICS. E. I. Martsinkonene. Za Progress Proizvodstva, Sovet. Narod. Khoz. Lit. S.S.R. No. 2: 27-31 (1958). Summary in Chem. Abstr. 55: 5960b (1961). (3014)

FOAM, FLOW, AND LEVEL DYEING: SOME NEW INFORMATION ON THE FACTORS INFLUENCING THE FLOW OF DYE LIQUOR THROUGH WOOL PACKAGES. H. R. Hadfield and D. R. Lemin (Imp. Chem. Inds. Ltd). J. Soc. Dyers Colourists 77: 198-205 (May 1961).
Results of a quantitative study of the effect of foam on the flow of dye liquor through a textile package are presented. It is shown that a build-up of foam can almost stop dye-liquor flow. Silicone antifoaming agents are shown to be valuable in eliminating the deleterious effects. 7 refs. (3015)

SOME OBSERVATIONS ON THE USE OF CARRIERS IN DYEING POLYESTER FIBERS. D. P. Hallada, M. C. Keen, and R. J. Thomas (E. I. du Pont de Nemours & Co.). Am. Dyestuff Reptr. 50: P445-P450 (June 12, 1961).
Observations on the practical use of various compounds as carriers and the theory of their function are reviewed. Data are presented to show the effect of variations in heat-setting temperatures on the absorption from carrier baths of disperse dyes by both Dacron 54 and 64, and of cationic dyes by Dacron 64. Attention is directed to the behavior of cationic dyes on application to Dacron 64 from nonionic and anionic carrier systems. 15 refs. (3016)

DYEING UNSCOURED WOOL. PART 1. L. I. Fidell (Am. Cyanamid Co.). Am. Dyestuff Reptr. 50: 361-363 (May 15, 1961).
It is generally accepted procedure to scour wool, prior to dyeing, to a maximum of 0.50% grease retention. After dyeing it has been found necessary to add oils or emulsions to the fibers as protective coatings and for lubrication against tangling, matting, and tearing in the ensuing processes of carding, combing, spinning, plying, and weaving. The work detailed in this paper indicates that the prior scouring of wool and subsequent replacement of lubricants which later must be removed is not essential. (3017)

DYEING UNSCOURED WOOL. PART 2. L. I. Fidell (Am. Cyanamid Co.). Am. Dyestuff Reptr. 50: 397-405 (May 29, 1961).
The suitability of scouring after dyeing, through the use of a nonionic such as Deceresol NI, is indicated as applicable not only to neutral (metalized) dyes but to acid (metalized) dyes, acid dyes, direct dyes, or any dyes that will withstand a low-temperature non-alkaline scouring. 11 refs. (3018)

MODERN CONTINUOUS DYEING PROCESSES. R. Kern (Sandoz Ltd). Am. Dyestuff Reptr. 50: P366-P373 (May 15, 1961).
By means of steaming at increased pressure with saturated steam it is possible to apply substantive dye continuously without need of long steaming times. Various tests show that it is also possible to apply disperse, acid, and premetalized dyes to various synthetic fibers and blends. (3019)

NEW METHOD FOR THE DYEING OF KNITTED FABRIC MADE OF VISCOSE SILK ON A MECHANICAL VAT. M. Gershov and L. Augustaite. Padomju Latvijas Tautas Saimniečiba No. 9: 42-44 (1958). Summary in Chem. Abstr. 55: 5960g (1961).
The use of a restraining and emulsifying agent, OP-10, is described. (3020)

DYEING AND FINISHING OF MOIST FABRICS. S. A. Plaksin. Nauch.-Issledovatel. Trudy Ivanovsk. Nauch Issledovatel. Inst. Khlopchatobumazh. Prom. 22: 116-126 (1958). Summary in Chem. Abstr. 55: 5960-5961 (1961). (3021)

COMBINATION ROLLER PRINTING MACHINE. R. K. Smejda. Melliand Textilber. 42, No. 2: 210-212 (1961). In German. Through BCIRA 41: 1471 (1961).
The machine described is provided with three multicolor units for roller printing and one multi-color unit for the application of stripes. This equipment makes it possible to print between 11 and 403 colors on an area of 1,300 mm^2. The mechanism is explained, and advantages of the machine are enumerated. (3022)

SOME DEVELOPMENTS IN PACKAGE DYEING. W. H. Gambrell (Dominion Textile Co. Ltd). Can. Textile J. 78: 45-47 (May 12, 1961).
Old and new concepts in the package dyeing of wool, nylon, Orlon, and cotton are presented. (3023)

BEHAVIOR OF DISPERSE DYES DURING THE THERMOSOL PROCESS. W. Beckmann and W. Wunder. Melliand Textilber. 42, No. 2: 198-205 (1961). In German. Through BCIRA 41: 1464 (1961).
Disperse and vat dyes, which are suitable for dyeing synthetic fibers and their blends by the Thermosol process, give only medium shades at a low yield on acrylic fibers. Cationic dyes are fixed satisfactorily on polyamide and acrylic fibers, acid dyes on polyamides. Fiber tendering can be avoided by maintaining the temperatures below 200° C for up to 150 sec. Optimum conditions depend upon the fiber and dye; on Dacron and Perlon, the yields are 90-100% for medium shades. They can be considerably increased by the addition of assistants and reduction of time or temperature of treatment. The assistants accelerate the transfer of the dye from the fiber surface to the external fiber layer. This transfer is a factor determining the dyeing rate during the Thermosol process (in contrast to the action of carriers which accelerate diffusion). (3024)

SPECTROPHOTOMETRIC STUDY OF THE DYEING MECHANISM ON TEXTILE MATERIALS. O. K. Dobozi, L. Lang, and G. Khorvash. Zhur. Priklad. Khim. 34, No. 1: 204-208 (1961). In Russian. Through BCIRA 41: 1457 (1961).
Desized wool, silk, polyamide, and viscose fiber fabrics, extracted with petroleum ether to remove impurities, were dyed with direct dyes purified by paper chromatography and subsequent electrodialysis. The fabrics were examined spectrophotometrically, and a relationship was found between the adsorption of the dye on the fiber and the polarity of the latter. Wool exhibits the highest and polyamide the lowest polarity. As compared with that of polyamides, the adsorption spectrum of wool is shifted to the shorter wave-lengths. It is concluded that the dyeing mechanism depends upon the structure and type of fiber and, in particular, upon the nature, number, and position of the groups capable of forming secondary bonds. (3025)

SPECTRUM ANALYSIS OF DYED VINYLON AND COTTON FABRICS WITH DIRECT DYES IN THE VISIBLE REGION. PART 1. RELATIONSHIP BETWEEN THE WAVELENGTH OF THE ADSORPTION MAXIMA BANDS AND THE AMOUNT OF DYE ADSORBED BY THE FIBER. PART 2. RELATIONSHIP BETWEEN K/S AND THE AMOUNT OF ADSORBED DYE. PART 3. COLOR EXPRESSION OF DYED FABRIC BY MEANS OF THE C.I.E. COLOR SYSTEM. K. Fujino and F. Fujimoto. J. Soc. Textile Cellulose Inds. Japan 17, No. 2: 172-182 (1961). In Japanese (English summary). Through BCIRA 41: 1458 (1961).
The purpose of the investigation is to study the state of the dye molecules in dyed fibers. The Kubelka-Munk equation (coefficient K/S) gives the same relationship for dyed fabric as the Lambert-Beer law does for the dye solution. (3026)

CHEMISTRY OF REACTIVE DYES. H. Zollinger. Angew. Chem. 73, No. 4: 125-126 (1961). In German. Through BCIRA 41: 1455 (1961).
In this review, the author discusses the discovery of reactive dyes, their constitution, the mechanism of nucleophilic substitution of aromatic heterocyclic compounds, and the fixing mechanism of reactive dyes in the fiber. 110 refs. (3027)

PRODUCTION OF ELECTRON-MICROSCOPIC PORES IN SURFACE LAYERS OF FIBERS AND THE MECHANISM OF DYEING. Y. Matsunaga and M. Kato. J. Soc. Textile Cellulose Inds. Japan 17, No. 2: 144-149 (1961). In Japanese (English summary). Through BCIRA 41: 1465 (1961).
When polyamides and polyesters are heated (80-200° C, 10^{-2}-10^{-3} mm Hg) they give off low polymers (dimers, trimers, etc.) as well as absorbed gases, and dye much better. It is suggested that pores are produced in the surface layers of the fibers. (3028)

INTERACTION OF REACTIVE DYES WITH α-AMINO ACIDS. B. M. Bogoslovskii, A. D. Virnik, and M. A. Chekalin. Izvest. Vysshikh Ucheb. Zavedenii, Tekhnol. Legkoi Prom. No. 4: 80-87 (1960). Through Chem. Abstr. 55, No. 1: 997-998 (1961). (3029)

PROCESSING OF NYLON STOCKINGS. D. B. McPherson (Sketchley Ltd). Hosiery Times 33: 53 (Oct. 1960).
Variations in steaming responsible for uneven dyeing of hosiery are discussed. (3030)

HISTORY OF FABRIC PRINTING IN FRANCE. J. Palluy. Teinture et Apprets No. 59: 124-127 (Aug. 1960). In French. Through BCIRA 41: 457 (1961).
This lecture was delivered in Lyon at the Dyeing and Printing Conference in May 1960. (3031)

EFFECT OF ULTRAVIOLET RADIATION ON THE DYEING PROPERTIES OF WORSTED FABRIC. G. L. Stott (C.S.I.R.O. Wool Research Labs.). (Letter to the editor). J. Soc. Dyers Colourists 77: 206-208 (May 1961).
Since exposure of wool to ultraviolet radiation increases the rate of absorption of acid dyes, work was carried out to see if the effect could be applied to the printing of worsted fabrics. From the results it is evident that the method holds promise. Both advantages and disadvantages are cited. 7 refs. (3032)

NEW SYSTEM FOR DYEING KNITTED AND WOVEN PATTERNS. H. vom Hove (Emser-Werke AG). Dyer 125: 662-663 (May 5, 1961).
The system described for the preparation of pattern samples consists in sewing the knitted or woven sample onto a stainless steel gauze with a gage of about 25 to 30 mesh/sq cm. The flat gauze is then rolled to the shape of a cylinder which is fixed with screws; the gauze cylinder is put into a beaker or stainless steel container where the dyeing process takes place; for larger patterns a mechanically driven apparatus is used. (3033)

RETHINKING ABOUT CARPET DESIGN. P. Abbenheim. Man-Made Textiles 38: 58, 61 (May 1961).
The possible impact of the development of printed tufted carpets on carpet design is examined. (3034)

Mechanical processes D3

EMULSION-TREATED FLANNELS. B. N. Myl'nikov and F. A. Kutkin. Tekstil. Prom. 20, No. 4: 52-53 (1960). In Russian. Through BCIRA 41: 1112 (1961).
It is shown that the application of emulsions (containing sulfonated or nonsulfonated fatty acids, chlorinated paraffin, etc.) to the fabric preserves its strength during raising and gives a satisfactory nap. (3035)

CROWN CONTROL OF PAPER CALENDERS. M. D. Stone and A. T. Liebert (United Eng. & Foundry Co.). Tappi 44: 308-315 (May 1961).
This paper discusses the problems of obtaining the proper total crown for varying nip pressures, temperatures, speeds, etc., and focuses attention on a development which places in the hands of the operator the ability to vary the crown of the king roll (and also the top roll--independently) practically over the full range. The method is to bend the rolls by a hydromechanical system, which can be varied practically instantaneously, as desired. In addition, the paper gives equations for determining total crown, and formulas for required "true" crown, including the contribution of shear to roll deflection, and a description of how such true crown curves, i.e. crown shape, as contrasted to center magnitudes only, can be obtained by grinding with adjustable partial-cosine-curve crowning attachments. 12 refs. (3036)

DIE CUTTING OF SWEATER, SLEEVE STRIPS. C. Reichman. Knitted Outerwear Times 30: 3, 54 (June 12, 1961).
Die cutting, the technique of cutting garments on hydraulic cutters or clickers, is being adopted by many mills as a substitute for more conventional means of shaping sweater-strips on the cutting table. Advantages of the technique and the operation of a typical die cutting machine are described. (3037)

Drying, setting, conditioning D4

EFFECT OF TWIST SETTING TREATMENTS IN WATER. K. Furusato. J. Soc. Textile Cellulose Inds. Japan 17, No. 2: 106-110 (1961). In Japanese (English summary). Through BCIRA 41: 1429 (1961).
The twist set percentage of worsted and woolen yarns decreases as the bath temperature is increased up to 40° C but rises again, for woolen yarns, above 60° C. (3038)

RADIANT HEATING: ITS CHARACTERISTICS, GENERATION, AND APPLICATION. F. J. Prince, O. R. Wagner, and E. S. Mack. Tappi 44: 208A-217A (May 1961).
The scope of this paper is to introduce and define radiant energy and describe the commonly available sources of this energy. The paper includes a brief transition into the mathematics of heat transmission and the nature and determination of heat exchange by radiation. It is shown that gas-generated infrared has a distinct advantage over infrared generated by electricity in the processing and drying of paper. The advantages of direct fired radiant heaters are shown, with a discussion of proper installation methods, economics and results. A method of measuring the temperature of the moving web is shown. (3039)

LOW-TEMPERATURE RADIANT HEAT DRYING. PART 1. NEW SYSTEM FOR PAPERMAKING. H. L. Smith, Jr. Fibres and Plastics 22: 145-150 (May 1961).
The process described is a basically different means of increasing the drying capacity of a paper machine without the requirement of adding additional dryers. The cost of water evaporated is also lower than the cost in the present conventional steam-heated dryers. A discussion of the basic principles involved is included. (3040)

ADVANTAGES OF USING GAS-FIRED EQUIPMENT IN THE FINISHING AND DRYING OF TEXTILES. B. R. Andrews (Andrews & Goodrich Co.). Knitter 25: 38-39 (Mar. 1961). (3041)

DRYING MACHINE WITH VERTICAL DRYING COLUMN FOR TUBULAR KNIT FABRICS. Elektro Stahlbau. Hosiery Times 33: 71, 92 (July 1960). (3042)

EXPERIMENTS FOR DETERMINING THE OPTIMUM WATER-EXTRACTING METHODS FOR DRYING CYLINDERS, WITH RESPECT TO HEAT TRANSFER AND POWER CONSUMPTION. W. Barnscheidt and M. Schädler. Papier, Darmstadt 14, No. 10a: 600-609 (1960). In German. Through BCIRA 41: 475 (1961).
Results obtained from experiments carried out by installing a steam-heated cylinder of 1.50-m diameter and 5-m width and examining the conditions, under which the heat resistance between the apron phase inside the cylinder and on the cylinder surface becomes as small as possible, are reported. (3043)

TESTING AND MEASUREMENT E

ENCYCLOPEDIA OF MICROSCOPY. G. L. Clark, ed. Reinhold Pub. Corp., N.Y. 1961. 693 p. $25.00.
Articles cover the biological, medical, pharmaceutical, forensic, chemical, engineering, and industrial aspects of microscopy. The microscopy of textile fibers is discussed on p. 343-363. References. (3044)

Fibers E1

INVESTIGATION ON INTERFIBER FRICTION IN FIBER SYSTEMS. PART 5. INTERPRETATION OF MECHANISM OF EXTENSION OF LOADED SLIVER IN TERMS OF WITHDRAWAL FORCE OF A SINGLE FIBER FROM THE BUNDLE. PART 6. EXPERIMENTS ON THE STICK-SLIP MOTION OF A FIBER BETWEEN COMPRESSED WADS. S. Kinoshita and T. Takizawa. J. Soc. Textile Cellulose Inds. Japan 17, No. 2: 89-99 (1961). In Japanese (English summaries). Through BCIRA 41: 1427 (1961).
The effect of sectional fiber fullness on the load-extension curve was measured for crimped, regular, and direct-cut viscose rayon sliver and cotton sliver. In the initial stage of loading of the sliver the interfiber frictional force (F) is independent of the fullness and about one-fiftieth of the withdrawal force (F_s) of a single fiber from the sliver; in the moderate and extreme ranges of sliver extension, F is proportional to the fullness and $F/F_s = 1/4$. Stick-slip motion of a nylon spring inserted into two wads of viscose rayon was studied. (3045)

RELATIONSHIPS BETWEEN THE FIBER-CHARACTERS MEASURED BY THE FIBROGRAPH WITH SIMILAR CHARACTERS OBTAINED BY THE BALLS SORTER. H. R. Navkal. Indian Cotton Growing Rev. 13: 284-287 (July 1959).
From the results of the present investigation it is concluded that when a large number of samples must be tested in a limited time the Fibrograph can be utilized to weed out a number of undesirable samples from any given lot, and the remaining ones should be tested by using the more accurate Balls sorter. 6 refs. (3046)

SULFUR CONTENT OF WOOL KERATIN. C. Earland (Inst. Technol., Bradford). (Letter to the editor). Textile Research J. 31: 492-493 (May 1961).
The Schöniger method for determining sulfur in organic compounds, which involves burning the material in oxygen in a flask containing hydrogen peroxide and determining the sulfuric acid produced, was applied to 64s wool with satisfactory results. 11 refs. (3047)

COMPARISON OF DIFFERENT METHODS OF TESTING BY THE SHIRLEY ANALYSER. V. V. V. Gupte and R. L. N. Iyengar. Indian Cotton Growing Rev. 13: 101-108 (Mar. 1959).
Results obtained using the Indian Central Cotton Comm. (ICCC) test method were compared with those using the proposed ISO procedure. Although the accuracy of the ICCC test is lower, the results can be obtained much more easily and in a shorter period. The ISO values can be derived by applying the necessary corrections by using the appropriate regression equations which are given. (3048)

COTTON FIBER MATURITY AND FINENESS: BOTH PREDICTED SEPARATELY, ACCURATELY, AND RAPIDLY. W. E. Chapman, Jr. (Southwestern Cotton Ginning Research Lab.). Textile Research J. 31: 429-433 (May 1961).
Both Causticaire fineness and Causticaire maturity of cotton fibers can be predicted separately, yet simultaneously, accurately, and rapidly. Only micronaire readings, a conversion table, and the varietal identity are necessary for accurate predictions. 22 refs. (3049)

ASSESSMENT OF SPINNING VALUE OF COTTON BY SPINNING A SMALL SAMPLE. V. V. Gupte. Indian Cotton Growing Rev. 13: 176-181 (May 1959).
The construction and use of a miniature spinning plant consisting of a bow, a card, a drawframe and a spinning frame to carry out micro-spinning tests is described. 3 refs. (3050)

TESTING OF TEXTILES. DETERMINATION OF THE MEAN LENGTH OF MANMADE STAPLE FIBERS BY THE METHOD OF SINGLE FIBER MEASUREMENT. German Standards Comm. Melliand Textilber. 42, No. 2: 231-232 (1961). In German. Through BCIRA 41: 1488 (1961).
The draft specification DIN 53 808 describes the method of sampling, devices, measurement, evaluation of the measurements (with example) and data to be included in the test report, when determining the mean fiber length of manmade staple fibers (and its confidence range) by measuring the length of decrimped single fibers. (3051)

VIBROSCOPE TO MEASURE THE COUNTS OF FIBERS IN PLACE ON THE DYNAMOMETER. P. Depalle (Soc. Rhodiaceta). (Letter to the editor). Textile Research J. 31: 484-485 (May 1961).
A special kind of vibroscope was developed in order to determine the count of the fiber without removing it from the dynamometer. To achieve this, only one part of the vibroscope is fastened on the dynamometer. It is brought close to the fiber very rapidly, exactly at the moment when the count is to be determined, without any adjustment being necessary. It is then removed in a minimum of time without hindering the carrying out of the dynamometric test. (3052)

Yarns E2

BETA GAGE MEASURES YARN THICKNESS. Man-Made Textiles 38: 39 (May 1961).
The operation of a beta particle thread thickness gage, developed by R. K. Barnes and J. H. Barrett, Isotope Applications Unit, Wantage Research Lab., D.S.I.R., is described. The gage records variations in the mass per unit length along materials in the form of threads. The present experimental instrument covers the range 50 to 300 denier. (3053)

SKEIN STRENGTH OF YARN IN THE METRIC SYSTEM. R. L. N. Iyengar, V. V. Gupte, H. R. Navkal, and V. N. Modak. Indian Cotton Growing Rev. 13: 393-402 (Sept. 1959).
A new yarn strength index is defined. It is derived by dividing the breaking strength in grams of a metric skein of yarn (consisting of 100 loops each of one meter length) divided by its tex number. (3054)

STANDARDIZATION OF METRIC-SKEIN STRENGTH FOR INDIAN COTTONS. H. Navkal. Indian Cotton Growing Rev. 14: 490-500 (Nov. 1960). (3055)

EFFECT OF LOAD GRADIENT VARIATIONS ON THE RESULTS FROM THE AUTOMATIC USTER DYNAMOMETER. E. Honegger. Bull. Inst. Textile France No. 90: 73-92 (Sept./Oct. 1960). In French. Through BCIRA 41: 1497 (1961).
It has been found that variations in the load gradient during tensile strength testing of yarns on the Uster dynamometer are due to the construction of the apparatus and are so small that they are hardly detectable in the curve obtained. In practical use, these variations have no appreciable effect on the results. (3056)

STRESS-ELONGATION PROPERTIES OF YARNS SUBJECTED TO REPEATED SHORT-PERIOD STRESSES. PART 2. W. Wegener. Melliand Textilber. 42, No. 2: 154-161 (1961). In German. Through BCIRA 41: 1496 (1961).
A further newly-developed impact tester (abstr. 2160/61) is described and illustrated. The decisive factors during stress of the thread are the mass, the kinetic energy, and the velocity of the striking element. In the tester described, the energy can be varied by the tensioning path of the springs; the mass can be altered by exchanging certain parts of the apparatus. The behavior of the thread during stressing can be characterized from the maximum thread strength, the forces producing elastic and permanent deformation, the elongation occurring, and other values; all these values can be determined from the data of the apparatus and the registered time/path curve. Experimental results, obtained on tire rayon, are used as an example for the mechanism of the new tester. (3057)

OCCURRENCE OF NEPS IN WORSTED SLIVERS. N. Primentas. Textile J. Australia 36: 206-208 (Feb. 20, 1961).
Following a discussion of the sources and causes of nep formation, the design and use of the Convometer device is briefly described. 4 refs. (3058)

CSTEMP METHOD FOR DETERMINING THE DEGREE OF HEAT SET IN SYNTHETIC YARNS. Skinner's Silk & Rayon Record 35: 434-437 (May 1961).
The theory and practice of the critical solving temperature (CSTemp) method, developed at the Czechoslovakian Knitting Industries' Research Inst. by Dr. Schwertassek, are described. This method is used for checking the degree of heat-setting in both smooth and crimped polyamide filament yarns, for example, in determining the steam setting efficiency in various layers of the yarn packages. (3059)

NOTE ON THE UNIVERSAL YARN NUMBERING SYSTEM. H. Navkal and R. L. N. Iyengar. Indian Cotton Growing Rev. 13: 164-175 (May 1959).
It is the purpose of this note to explain the new units employed in the proposed universal tex system and to give formulas and tables for obtaining these units from the familiar units employed at present. 5 refs. (3060)

INTRODUCTION OF UNIVERSAL TEX YARN NUMBERING SYSTEM IN COTTON SPINNING MILLS. B. H. Divate (Gokak Mills). Indian Textile J. 71: 250-252, 266 (Feb. 1961).
A systematic scheme for changeover to the tex system is described. (3061)

RESULTS OF DYNAMIC TIRE CORD TESTING AS COMPARED WITH THE BEHAVIOR OF CORD IN THE TIRE. G. Kemmnitz. Melliand Textilber. 42, No. 1: 16-20; No. 2: 152-154 (1961). In German. Through BCIRA 41: 1495 (1961).
Methods developed by examining the dynamic fatigue of cords in the tire (resistance to impact, tenacity, fatigue on compression, temperature behavior, damping phenomena) are reviewed and compared. (3062)

HUNGARIAN TIRE CORD FATIGUE TESTER. Man-Made Textiles 38: 57 (May 1961).
In the tester described (developed by Z. Bartha) the cord is embedded in rubber to more closely simulate the stress encountered in use. (3063)

DIELECTRIC METHOD FOR THE RAPID DETERMINATION OF THE MOISTURE CONTENT OF TIRE CORD. E. Haase-Deyerling and H. Meumann. Kautschuk u. Gummi 13: WT 362-364, 366 (1960). Summary in Chem. Abstr. 55: 5005-5006 (1961). (3064)

EVALUATION AND POSSIBLE USE OF PORTABLE UNIFORMITY METER. Bobbin and Beaker 18: 6-8, 15-16 (Spring 1961).
Data obtained using the portable uniformity meter are compared with those obtained using the uniformity analyzer in carding, drawing, roving, and spinning. A list of advantages and disadvantages of the portable uniformity meter compared to the uniformity analyzer are given for each process. (3065)

Fabrics E3

APPARATUS FOR MEASURING THE CRISPNESS OF FABRICS. USE IN CONTROLLING THE WRINKLE RECOVERY OF FABRICS. J. Henno and R. Jouhet. Bull. Inst. Textile France No. 90: 95-100 (Sept./Oct. 1960). In French. Through BCIRA 41: 1501 (1961).
Principles of the method and the apparatus for measuring the crispness of fabrics are described, and a mathematical formula is proposed for expressing the crease recovery. (3066)

HANDLING QUALITY OF WOVEN FABRICS. PART 1. PRELIMINARY EXPERIMENTS ON COMPRESSIBILITY AND THICKNESS. H. Nakazato and I. Kageyama. J. Textile Machy. Soc. Japan 14, No. 2: 118-123 (1961). In Japanese (English summary). Through BCIRA 41: 1500 (1961).
Samples from broad cloth, lightly sized with carboxymethyl cellulose to get various degrees of compressibility, were tested by sensory methods. The ranking by different people for compressibility agreed with results for hardness obtained by Peirce's cantilever or loop methods (Summary, 1930, p. 608). Sensory qualities are much influenced by other factors, e.g. thickness is much affected by hardness. (3067)

Other E4

NEW COLOR-MEASURING INSTRUMENTS FOR USE BY THE TEXTILE INDUSTRY. F. J. Rizzo and A. O. Ramsley (U.S. Quartermaster Research & Eng. Command). Am. Dyestuff Reptr. 50: P374-P384 (May 15, 1961).
The study reported analyzes the factors involved in color measurement and shows how corrective steps in design and in concepts of use have been applied to newly developed instrumentation under Quartermaster sponsorship. A Tristimulus Colorimeter and a Rapid Scanning Spectrophotometer, capable of direct readings of color and color differences are described, and their performances defined in comparison with standard visual assessment. General specifications of design characteristics are given. (3068)

STUDY OF THE FASTNESS OF DYEINGS TO PERSPIRATION. EFFECT OF HISTIDINE. P. Ponschel, G. Debeauvais, G. Mazingue, and M. van Overbeke. Bull. Inst. Textile France No. 90: 39-48 (Sept./Oct. 1960). In French. Through BCIRA 41: 1503 (1961).
The addition of histidine to a solution of artificial sweat has proved to be a suitable method for testing the fastness of dyeings to perspiration. In the case of dyeings on a cellulosic substrate treated with copper salts, the addition of histidine to the artificial sweat solution increases bleeding and decreases the lightfastness. Histidine has no effect on other dyes, especially metalliferous dyes on wool. (3069)

MILL MANAGEMENT F

MODERNIZATION 1961. Textile World, May 1961, p. 42-111.
All-out modernization: how one company makes good ideas come alive, p. 42-48; Modernize through leasing, p. 49-51; Your next move: update that organization, p. 53-56; Modernizing by creating a new product, p. 57-60; How new machinery boosts small-mill production, p. 61-63; Old mill gets a facelifting, p. 64-66; Spending $3.4 million on mill modernization, p. 68-70; Cutting finishing costs by modernization, p. 86-87; Modernizing step by step [dyeing and finishing], p. 90-92; Figuring when to modernize, p. 109; Getting modernization money, p. 110-111. (3070)

SOME PRESENT-DAY RECRUITMENT PROBLEMS FACING THE LANCASHIRE TEXTILE INDUSTRY. N. Aspden. Textile Weekly 61 (1): 1119-1126, 1156 (May 12, 1961). (3071)

DO YOU HAVE WHAT IT TAKES TO BE A SUPERVISOR? PART 2. W. Westbrook. Textile Bull. 87: 45-46 (June 1961).
The qualities that make for a good supervisor are outlined. (3072)

METHOD OF ECONOMIC ANALYSIS OF THE PAPERMAKING PROCESS. S. G. Holt (Consolidated Water Power & Paper Co.). Tappi 44: 325-332 (May 1961).
A method of economic analysis is described which appears to be particularly suitable for analyzing papermaking processes. Several examples of typical analyses are given together with some tentative conclusions on the effect of various design factors. (3073)

Industrial engineering F1

INVENTORY CONTROL VIA STATISTICAL FORECASTING TECHNIQUES. W. R. Evans. Knitted Outerwear Times 30: 15-17 (June 12, 1961). (3074)

LINEAR PROGRAMMING AND THE PAPER INDUSTRY. R. W. Van Duyne (W. Va. Pulp & Paper Co.). Tappi 44: 189A-193A (May 1961).
The application of linear programming to the problem areas of trim problem, machine assignment problem, product distribution, and pulpwood procurement is discussed. Linear programming models of the four problem areas are described in the appendix. 6 refs. (3075)

NOMOGRAPHS IN ENGINEERING ECONOMICS. H. A. Quigley and J. B. Weaver (Atlas Powder Co.). Ind. Eng. Chem. 53: 47A-49A (May 1961).
The effect of changes in all the major economic variables of a project could easily be shown in three nomographs, a relatively compact presentation. Similar representation by tabular or graphical form would require considerably more space. Nomographs cannot completely replace these other forms, but can be used to summarize final results, and present best estimates, particularly in cases where interaction of many factors is an important consideration. (3076)

SAMPLING INSPECTION OF CONTINUOUS PROCESSES WITH NO AUTOCORRELATION BETWEEN SUCCESSIVE RESULTS. W. D. Ewan and K. W. Kemp. Biometrika 47, Parts 3 and 4: 363-380 (1960). Through BCIRA 41: 587 (1961).
Sampling methods developed for use in controlling the quality of output of a continuous manufacturing process (Brit. Nylon Spinners Ltd) are described. (3077)

EFFICIENCY OF MULTIPLE SPINDLE AUTOMATIC WINDING MACHINES WITH CONSTANT PATROLLING AND SERVICING TIMES. A. J. Howie and D. Brunnschweiler. Textile Research J. 31: 410-421 (May 1961).
A general solution for the efficiency of a single winding spindle is given, where the patrolling time of the automatic knotting unit may be less than the unwinding time of the supply bobbin. Constant supply bobbin unwinding times and random yarn breaks are assumed in obtaining the solution, which is modified to allow for doffing and servicing times. The case where different winding spindles are allocated to supply bobbins having different unwinding times is considered, and the patrolling time giving the maximum combined spindle efficiency is determined by means of a simple arithmetic technique. See also abstr. 2058/60. (3078)

WATER PURIFICATION IN THE TEXTILE INDUSTRY. H. Engelhardt. Textil-Praxis 16, No. 2: 172-179 (1961). In German. Through BCIRA 41: 1504 (1961). (3079)

WATER CONTAMINATION WITH WASTE PRODUCTS FROM PULP AND RAYON FACTORIES. A. Schinzel and H. Benger. Arch. Hyg. u. Bakteriol. 144: 329-344 (1960). Summary in Chem. Abstr. 55: 4837c (1961).
Waste water from pulp and rayon plants may contaminate surface and ground water and render it unsuitable for drinking. (3080)

Plant and equipment F2

TURBINE DEVELOPMENTS FOR TEXTILE MILLS. A. G. Arend. Textile Weekly 61 (1): 1063 (May 5, 1961).
The relative advantages of back-pressure and extraction turbines are briefly discussed. (3081)

SCIENCES G

Chemistry G1

NEW AQUEOUS CELLULOSE SOLVENTS BASED ON METAL COMPLEXES. G. Jayme. Tappi 44: 299-304 (Apr. 1961). (3082)

CATALYSTS FOR ACETYLATION OF CELLULOSE. C. J. Malm, L. J. Tanghe, and J. T. Schmitt (Eastman Kodak Co.). Ind. Eng. Chem. 53: 363-367 (May 1961).
Sulfuric acid was found to be the preferred catalyst since it concentrates on cotton linters at the site of acetylation and reacts with cellulose, and cellulose acetate sulfate triester has greater solubility in the acetylating bath than cellulose triacetate. 4 refs. (3083)

GRAFTING ON CELLULOSE ACETATE. G. Faraone, G. Parasacco, and C. Cogrossi (Ferrania SpA). J. Appl. Polymer Sci. 5: 16-22 (Jan./Feb. 1961).
The possibility of chemically grafting and polymerizing unsaturated monomers, styrene chiefly, on cellulose acetates of different acetyl contents after introduction of an unsaturated group in the cellulosic ester was studied. This group was introduced by further esterification with unsaturated anhydrides (maleic and crotonic) or by etherification with methacryloylethylenimine. The samples, examined by infrared spectrometry and by analytical methods, show a maximum of 6-8% of grafted styrene with respect to the cellulosic ester. 9 refs. (3084)

GRAFTING ONTO CELLULOSE AND CELLULOSE FIBERS. E. Schwab, V. Stannett, and J. J. Hermans. Tappi 44: 251-256 (Apr. 1961).
A number of recently developed techniques are described which have been successfully used for grafting vinyl monomers onto cellulose. The methods include radiation and chemically induced grafting. 33 refs. (3085)

COLORIMETRIC METHOD FOR DETERMINING THE REDUCING CARBONYL GROUPS IN CELLULOSE. O. Szabolcs. Papier, Darmstadt 15, No. 2: 41-44 (1961). In German. Through BCIRA 41: 1508 (1961).
The reducing groups in cellulose were determined by colorimetry of the red dye (triphenylformazan) formed from 2, 3, 5-triphenyltetrazoliumchloride by the action of reducing agents in alkaline medium, whereby the quantity of formazin formed is proportional to the reducing agent present. The dye is insoluble in water, but easily-soluble in organic solvents. The determination can be carried out in 15 min with an accuracy of $\pm 1\%$. The method is generally applicable, even in cases where the conventional methods cannot be used. (3086)

THERMAL DEPOLYMERIZATION OF CELLULOSE. O. P. Golova and R. G. Krylova. Dokl. Akad. Nauk U.S.S.R. 135, No. 6: 1391-1394 (1960). In Russian. Summary in BCIRA 41: 719 (1961). (3087)

PACKING DENSITY OF COTTON CELLULOSE PREPARATIONS. V. S. Sharkov and V. P. Levanova. Vysokomolekulyarnye Soedineniya 1, No. 5: 730-737 (1959). Through BCIRA 40: 571 (1960). In Russian.
The supermolecular structure of natural, mercerized, and dry-ground cotton cellulose was investigated by following the changes in density of the residues in the course of dissolution of the cellulose during alcoholysis and hydrolysis. The presence of strained regions in the cellulose preparations was demonstrated, the breakdown of which led to an increase in density. Looser structures are formed on dry grinding, but the structure becomes denser in presence of water and still closer packing is hindered by hydrogen bonding between macromolecules. (3088)

HEAT OF WETTING OF COTTON CELLULOSE BY ORGANIC LIQUIDS. K. U. Usmanov and I. K. Khakimov. Uzbek. Khim. Zhur. No. 2: 21-25 (1959). Through BCIRA 40: 572 (1960). In Russian.
The heat of wetting of dry cotton decreases from 7.3 to 1.34 cal/g with increase in molecular weight in the homologous series of alcohols from methyl to amyl, and the isoalcohols give higher values due to their greater activity. (3089)

CARBOXYL GROUP DETERMINATION IN CELLULOSES. M. Rebek. A. Kirnbauer, and F. K. Semlitsch. Papier, Darmstadt 14, No. 10a: 510-517 (1960). In German. Through BCIRA 41: 535 (1961).
Methods for determining cellulose acidity are reviewed, and attempts to develop a standard method for determining the functional groups in cellulose (by the international working team Tappi-ACS-ASTM-ICCA) are described. The results are tabulated. 24 refs. (3090)

ACTION OF AQUEOUS SOLUTIONS OF CHLORINE DIOXIDE ON COTTON CELLULOSE AND ITS BEARING ON THE ACTION OF CONCENTRATED ACIDIFIED SOLUTIONS OF SODIUM CHLORITE ON HYDROCELLULOSES. T. P. Nevell (Shirley Inst.). J. Textile Inst. 52: T185-T194 (Apr. 1961).
The prolonged action of molar sodium chlorite on hydrocelluloses at pH 2.9 and 20° C causes oxidation additional to the conversion of terminal reducing groups into carboxyl groups. Unmodified cotton cellulose is also oxidized under the same conditions after a period of induction of about 24 hr. It is believed that this oxidation is due to chlorine dioxide, which is gradually developed through decomposition of the chlorous acid present. This possibility was examined further by studying the effect of cold molar sodium chlorite acidified to pH 2.9 on cotton cellulose and a hydrocellulose, and the effect of cold concentrated aqueous solutions of chlorine dioxide at various pH's on cotton cellulose. 10 refs. (3091)

CHEMISTRY OF ALKALINE DEGRADATION OF CELLULOSE AND OXIDIZED CELLULOSE. PART 1. A. Meller. Holzforschung 14: 78-89 (1960). Through Chem. Abstr. 54, No. 22: 25787-25788 (1960).
This is a critical review of the literature. 84 refs. (3092)

STRUCTURE OF CELLULOSE. V. I. Sharkov. Vysokomol. Soed. 2, No. 11: 1747-1749 (1960). In Russian. Through BCIRA 41: 555 (1961).
Theories referring to cellulose structure are reviewed, and it is concluded that none of them proves the existence of an amorphous or (vitrified) liquid structure. 48 refs. (3093)

VISCOELASTIC PROPERTIES OF REGENERATED CELLULOSE FIBERS IN WATER. K. Shirakashi, K. Ishikawa, M. Segawa, and G. K. Joarder. J. Japan Soc. for Testing Materials 9: 307-312 (Apr. 1960). In Japanese (English summary). Through BCIRA 41: 873 (1961).
The relation between mechanical properties and fine structure was studied; Fortisan, Bemberg rayon, viscose rayon, high tenacity rayon, cellophane, and gel-cellophane were examined. (3094)

LOCATION OF SUBSTITUENTS IN CELLULOSE DERIVATIVES. C. B. Purves and E. B. Eddy. Chem. in Canad. 12, No. 12: 25-29 (1960). Summary in Chem. Abstr. 55: 4950c (1961).
Review. 25 refs. (3095)

SWELLING OF NATIVE CELLULOSES. H. Ruck. Papier, Darmstadt 14, No. 10a: 495-509 (1960). In German. Through BCIRA 41: 556 (1961).
A new x-ray absorption method (determination of an additional small-angle absorption coefficient) is described, and its application to studies of the fine structure of native microfibrils, mercerization phenomena, swelling in dilute sodium hydroxide solutions, the theory of microfibril cleavage, small-angle effect of cellulose, shape and dimensions of intra- and inter-microfibrillar interstices, and sorption properties and density of ground celluloses is reviewed. 67 refs. (3096)

SOME ASPECTS OF THE REACTION BETWEEN UREA AND CELLULOSE. L. Segal and F. V. Eggerton (So. Reg. Research Lab.). Textile Research J. 31: 460-471 (May 1961).
A reaction occurs between cellulose and urea when cellulose and an aqueous solution of urea are heated to an elevated temperature. Evidence for reaction are (1) insolubility of the treated cellulose in cupriethylenediamine, (2) changed infrared absorption spectrum, (3) nitrogen content unaffected by boiling water, (4) changed dyeing properties, and (5) modified moisture regain. There is no change in the cellulose x-ray diffraction pattern, and all of the original cellulose properties are restored by boiling in 2% caustic solution. The urea treatment does not affect the textile properties of cotton fabric. Biuret also reacts with cellulose giving a product having the same properties as the material treated with urea. 16 refs. (3097)

THE HEAT OF WETTING OF COTTON FIBERS OF THE GRADE 108-F. K. U. Usmanov and A. A. Yul'chibaev. Dokl. Akad. Nauk Uzbek S. S. R. No. 4: 15-20 (1956). Through BCIRA 40: 573 (1960). In Russian.
Structural changes during growth were followed by measurements of heat of wetting (related to the thickening of the fiber). (3098)

BLOCK AND GRAFT POLYMERS. W. J. Burlant and A. S. Hoffman. Reinhold Pub. Corp., N.Y. 1960. 166 p. $7.95.
Contents: Nomenclature; Separation and isolation of block and graft polymers; Chain transfer reactions; Radical attack of unsaturated backbones; Reactions of macromolecules containing functional groups; Photolytic reactions; Ionizing radiation; Mechanical degradation; Stereoblock polymers. References. (3099)

POLYMERIZATION OF METHACRYLIC ACID IN IRRADIATED NYLON 6.6 FIBERS. A. R. Mathieson (Leeds Univ.). (Letter to the editor). J. Soc. Dyers Colourists 77: 208-209 (May 1961). (3100)

SEPARATIONS OF METHYLATED SUGARS BY GAS LIQUID PARTITION CHROMATOGRAPHY. E. Klein and C. J. Barter, Jr. (Courtaulds Inc.). (Letter to the editor). Textile Research J. 31: 486-487 (May 1961).
The resolution of some methyl glycosides of dimethyl glucose is reported in the hope that the technique will aid in the elucidation of cellulose cross-linking. (3101)

MECHANISM OF EMULSION POLYMERIZATION OF VINYLIDENE CHLORIDE. PART 1. P. M. Hay et al (Olin Mathieson Chem. Corp.). J. Appl. Polymer Sci. 5: 23-30 (Jan./Feb. 1961).
Results of a study of the effect of sodium lauryl sulfate concentration and initiator concentration on the emulsion polymerization of vinylidene chloride are presented. The results are discussed in relation to the existing theories on the mechanism of emulsion polymerization. 12 refs. (3102)

MECHANISM OF EMULSION POLYMERIZATION OF VINYLIDENE CHLORIDE. PART 2. EFFECT OF COALESCENCE OF POLYMER PARTICLES ON KINETICS. J. C. Light, L. Marker, A. T. Santonicola, and O. J. Sweeting (Olin Mathieson Chem. Corp.). J. Appl. Polymer Sci. 5: 31-38 (Jan./Feb. 1961).
In seeking an explanation for the unusual kinetics observed in the persulfate-catalyzed emulsion polymerization of vinylidene chloride, the role of particle coalescence are examined. A theory is proposed and the predicted results are compared with experiment. 17 refs. (3103)

MECHANISM OF EMULSION POLYMERIZATION OF VINYLIDENE CHLORIDE. PART 3. EFFECTS OF STIRRING RATE ON KINETICS. C. P. Evans et al (Olin Mathieson Chem. Corp.). J. Appl. Polymer Sci. 5: 39-47 (Jan./Feb. 1961). (3104)

RELATION OF STRUCTURE TO PROPERTIES IN POLYURETHANES: EFFECT OF BRANCHING. E. F. Cluff, E. K. Gladding, and J. B. Rogan (E. I. du Pont de Nemours & Co.). J. Appl. Polymer Sci. 5: 80-85 (Jan./Feb. 1961).
Short arylurethane branches reduce crystallization tendencies of the polymer and alter its bulk and solution viscosity behavior. Vulcanizate properties, such as resilience and modulus, are not affected. Dynamic behavior of polymers containing long chain branches, as judged by Yerzley resilience, improves as the proportion of long chain branches in the vulcanizate network is reduced. (3105)

QUANTITATIVE DETERMINATION OF CARBOXYL GROUPS IN POLYAMIDES. E. Y. Vaiman, L. I. Pokrovskii, and S. S. Frolov. Zhur. Priklad. Khim. 34, No. 1: 232-233 (1961). In Russian. Through BCIRA 41: 1509 (1961).
The method described is based on treating the water-soluble amino acids of the polyamide resin or fiber with formaldehyde, and titrating the filtrate with hydrochloric acid solution in the presence of phenolphthalein as indicator. (3106)

INFLUENCE OF SULFURIC ACID HYDROLYSIS ON THE LATERAL ORDER, STRENGTH, ELONGATION, AND MOLECULAR CHAIN LENGTH OF TWO NYLON FILAMENT FIBERS. B. E. Densmore. Univ. Microfilms, L. C. Card No. Mic 60-2150, 101 p.; Diss. Abstr. 21: 182-183 (1960). Through Chem. Abstr. 55, No. 2: 2112h (1961). (3107)

MECHANISM OF THE THERMAL DECOMPOSITION OF CELLULOSE IN VACUUM. PART 1. COMPARATIVE STUDY OF THERMAL DECOMPOSITION OF COTTON CELLULOSE AND CELLULOSE HYDRATE. PART 2. INHIBITION OF THERMAL DECOMPOSITION. O. P. Golova, R. G. Krylova, and I. I. Nikolaeva. Vysokomol. Soed. 1, No. 9: 1295-1308 (1959). Summary in BCIRA 40: 1981 (1960). In Russian. (3108)

DIRECT EXAMINATION OF POLYMER DEGRADATION BY GAS CHROMATOGRAPHY. PART 1. APPLICATIONS TO POLYMER ANALYSIS AND CHARACTERIZATION. A. Barlow, R. S. Lehre, and J. C. Robb. Polymer 2, No. 1: 27-40 (1961). Through BCIRA 41: 1510 (1961).
A technique involving pyrolysis on a filament, so arranged that the carrier gas sweeps the degradation products directly into the analysis column, is described. Some results are given. (3109)

ENERGETIC INTERACTIONS BETWEEN TEXTILE FIBERS AND SOLID SOIL IN THE WASHING PROCESS. H. Lange (Henkel & Cie GmbH), translated by W. J. Schwarz from Kolloid Z. 154, No. 2: 103-110 (1957); 156, No. 2: 108-113 (1958). Am. Dyestuff Reptr. 50: 433-436, 464 (June 12, 1961).
The aim of the present paper is to give a survey on the cooperation of all types of forces effective between fibers and dirt in a washing liquor, as well as on the consequences of these forces on the washing process. The considerations presented here are restricted to solid soil particles only, because the removal of oily dirt involves other processes and, therefore, the energies connected with this process must be calculated in a quite different manner. 25 refs. (3110)

EXPERIMENTS ON WOOL FROM COPPER-DEFICIENT SHEEP. PART 3. ACTION OF TRYPSIN ON OXIDIZED WOOL. R. W. Burley and F. W. A. Horden (So. African Coun. Sci. & Ind. Research). Textile Research J. 31: 389-398 (May 1961).
The action of trypsin on oxidized normal and copper-deficient wool was examined by N-terminal-residue estimations and by paper electrophoresis and chromatography on the tryptic digests. Trypsin readily solubilizes oxidized wool but does not digest it completely, probably because of its high cysteic-acid concentration. Little difference was found between normal and copper-deficient wool, although the latter gave a smaller amount of a certain group of acidic peptides. Preliminary tests on the chromatography of the tryptic digests using ion-exchange resins are reported. See abstr. 3686/60 for previous part. 23 refs. (3111)

FLOW OF FLUIDS: I/EC UNIT OPERATIONS REVIEW. M. Weintraub (U.S. Bur. Mines). Ind. Eng. Chem. 53: 405-408 (May 1961).
The bibliography which this report summarizes, covering principally the period between May 1959 and October 1960, is divided into the following categories: single-phase flow; metering and controls; multiphase flow; piping and pumps. 47 refs. (3112)

SOURCE BOOK OF THE NEW PLASTICS. Vol. 2. H. R. Simonds, ed. Reinhold Pub. Corp., N.Y. 1961. 310 p. $8.95.
This book is primarily about materials. The leading producers of plastics have been asked to furnish descriptions of their new materials. New features since vol. 1 include a chapter on progress in technology and a chapter on new processes and applications. Federal-sponsored research is reviewed. (3113)

STARCH. PAPER CHROMATOGRAPHY. M. Ulmann and M. Richter. Ernährungsforschung 5: 462-477 (1960). Summary in Chem. Abstr. 55: 6000g (1961).
Review. 32 refs. (3114)

ACTION OF TETRAKIS(HYDROXYMETHYL)PHOSPHONIUM CHLORIDE ON WOOL AND HAIR. L. S. Bajpai, C. S. Whewell, and J. M. Woodhouse (Leeds Univ.). J. Soc. Dyers Colourists 77: 193-197 (May 1961).
This paper provides detailed information on the dyeing and set/supercontraction characteristics of wool and hair in solutions of THPC and related compounds. Wool treated with THPC absorbs acid and premetalized dyes more readily than does untreated wool, and addition of THPC to solutions of premetalized dyes increases the rate at which the dye is taken up by the wool. Because of their ability to reduce the ·S·S· linkages in wool, solutions of THPC are effective setting agents, even at pH 1.3. Although oxidized, iodinated, and deaminated wools cannot be set in boiling water, they take a set in THPC solutions. Wool treated with potassium cyanide, however, cannot be set either in water or in THPC solutions. 11 refs. (3115)

Physics G2

ELECTRONIC THEORY AND CHARACTERISTICS OF A NEW INDUSTRIAL PROCESS FOR THE NEUTRALIZATION AND COMPLETE DISSIPATION OF ELECTROSTATIC CHARGES. G. V. Miglio. Notiziario 9, No. 2: 30-36; No. 3: 31-40 (1959). In Italian. Through BCIRA 40: 1924 (1960).
In this review the author discusses the electrical behavior of various textile fibers, the industries in which electrostatic charges occur, means for eliminating them, and the mechanism of static electrification. Special reference is made to the principles, use, and operating costs (as compared with other ionizing systems) of a new method which makes it possible to obtain maximum ionization over the whole surface of the material processed. 35 refs. (3116)

STUDIES ON ACRYLIC FIBERS. PART 18. FRACTIONATION OF ACRYLONITRILE POLYMERS. PART 19. FRACTIONATION OF ACRYLONITRILE POLYMERS BY SPENCER'S METHOD. M. Takahashi and M. Watanabe. J. Soc. Textile Cellulose Inds. Japan 17, No. 2: 111-124 (1961). In Japanese (English summary). Through BCIRA 41: 1492 (1961).
Five polymers (Orlon 42, more-dyeable Orlon 42, Dralon, and two polymers produced by redox polymerization) were fractionated from dimethylformamide solution with n-heptane/ether as precipitant. Results by this method and by Spencer's method for two polymers obtained by radiation and redox polymerization showed good agreement. (3117)

β-GAGES FOR TEXTILE INDUSTRY. S. Ogawa (Japanese Textile Research Inst.). J. Textile Machy. Soc. Japan 6: 59-62 (Dec. 1960).
Experiences in the use of β-gages for measuring sliver uniformity, and tow denier, for measuring area density, moisture pickup, and wear in fabrics, and for control of heat-setting of warp knit nylon fabrics are described. 14 refs. (3118)

FACTORS AFFECTING THE AMOUNT OF LIQUID HELD IN A FIBER BUNDLE BY INTERFIBER CAPILLARITY. J. R. Kuppers (Pfeiffer Coll.). (Letter to the editor). Textile Research J. 31: 490-492 (May 1961). (3119)

RADIOISOTOPES IN TEXTILE INDUSTRY. K. G. Das (Atomic Energy Etab., Trombay). Indian Textile J. 71: 253-256 (Feb. 1961).
The four principal techniques employed by industry in using radioisotopes (as tracers, as radioisotope gages, in radioisotope cameras for radiographic testing, and as sources of radiation) are described. (3120)

Biology G3

SOME PROBLEMS INVOLVED IN THE USE OF QUATERNARY AMMONIUM COMPOUNDS AS FABRIC DISINFECTANTS. E. McNeil, M. Greenstein, L. S. Stuart, and M. T. Goldsmith (U.S. Dept. of Agri.). Appl. Microbiol. 8: 156-159 (1960). Summary in Chem. Abstr. 55: 4972g (1961). (3121)

WOOL PESTS OF ECONOMIC SIGNIFICANCE. H. Höller. Melliand 42, No. 2: 106-112 (1961).
The insects which digest keratin in their larval state and the extent of damage that they cause are described. 6 refs. (3122)

MISCELLANY H

AHMEDABAD TEXTILE INDUSTRIES RESEARCH ASSOCIATION: TECHNOLOGICAL CONFERENCE, 1960. Indian Textile J. 71: 231-239 (Feb. 1961).
Brief abstracts of the following papers are given: Relation between lea-strengths in English and metric systems; Fiber configuration in slivers and roving and its effect on yarn quality; Waste extraction of comber: its dependence on comber settings and needling arrangement of cylinder and top comb; Spinning tension on ring frames; Most suitable renovation program in the spinning and weaving sections of mill XYZ; Sliver and yarn irregularity; Warp tension on looms; Causes of warp streaks; Warp stop motion on the ordinary looms; Lap licking in cards: can it be due to cotton characteristics; Effect of different hanks in the preparatory processes on the performance of the spinning department; Phosphate stabilizers in peroxide bleach baths; Effect of yarn twist and fabric cover factor on crease recovery and tear strength; Grafting of vinyl polymers to cellulose; Thermal and mechanical drying of textiles and efficient utilization of steam in textile industry; Methods and techniques for reducing the cost of colors and chemicals in dyeing; and Fastness specifications in relation to end use of fabrics. (3123)

KNITTING EQUIPMENT DEVELOPMENTS AT HANOVER FAIR. Knitted Outerwear Times 30: 7 (June 19, 1961). (3124)

REPORT ON KNITTING ARTS EXHIBITION. Modern Textiles Mag. 42: 32-36 (June 1961). (3125)

SOUTHERN TEXTILE ASSOCIATION, SOUTH CAROLINA DIVISION, SPRING MEETING. Textile Bull. 87: 57-63, 68-72 (June 1961). (3126)

NATIONAL ASSOCIATION WOOL MANUFACTURERS 96TH ANNUAL MEETING. Am. Textile Reptr. 75: 55-58 (June 8, 1961). (3127)

AUSTRALIAN COTTON MANUFACTURING INDUSTRY. R. J. Webster (Bradford Cotton Mills Ltd). J. Textile Inst. 52: P176-P185 (Apr. 1961). (3128)

REVIEW OF KNITTED OUTERWEAR ACTIVITY DURING 1960. S. S. Korzenik (Nat. Knitted Outerwear Assoc.). Knitted Outerwear Times 30: 163-165 (Apr. 24, 1961). (3129)

STATISTICS AND THE WOOL TEXTILE INDUSTRY. G. Richardson (Nat. Wool Textile Export Corp.). J. Textile Inst. 52: P112-P119 (Mar. 1961).
The statistics available to the wool textile industry, where they come from, and how they are used are examined. (3130)

ECONOMIC PROBLEMS OF THE CORDAGE INDUSTRY. S. A. G. Caldwell. Textile Mfr. 87: 176-178 (May 1961).
Progress in the attempts being made to extend the spinning range and improve the processing of the cheaper raw materials used in cordage manufacture to make them more competitive with manmade fibers in both cost and properties is discussed. (3131)

TEXTILE RESEARCH IN SCANDINAVIA. Skinner's Silk & Rayon Record 35: 355-356 (Apr. 1961). (3132)

ROLE OF THE PILOT PLANT RE-EXAMINED. H. F. Rase (Univ. Texas). Ind. Eng. Chem. 53: 43A-44A (May 1961).
Pilot plants are valuable for analogical reasoning in research and development, but they have limitations. Careful planning and safeguards against overuse make the pilot plant program an effective aid to successful design, operation, and marketing. (3133)

SACO-LOWELL RESEARCH CENTER. F. Dixon. Bobbin and Beaker 18: 12-14 (Spring 1961). (3134)

SOME IMPRESSIONS OF TEACHING INSTITUTIONS AND TEXTILE WORKS IN THE U.S.S.R. C. Earland (Bradford Inst. Technol.). J. Textile Inst. 52: P129-P134 (Mar. 1961). (3135)

PROPOSED NEW TEXTILE TERM: EXTENSITY. S. L. Anderson (Wool Inds. Research Assoc.). (Letter to the editor). J. Textile Inst. 52: P185 (Apr. 1961).
See also abstr. 2625/61. (3136)

TEXTILE INSTITUTE CONFERENCE PAPERS ON MODIFIED OR TEXTURED FILAMENT YARNS. PART 1. Knitted Outerwear Times 30: 11-15 (June 12, 1961).
A digest of the following papers is given: Technology of the production of false-twist textured yarns, by M. S. Burnip, J. W. S. Hearle, and G. R. Wray; Terylene bulked yarns, by C. S. Bruce. (3137)

A SHORT HISTORY OF TECHNOLOGY. T. K. Derry and T. I. Williams. Oxford Univ. Press, N.Y. 1961. 782 p. $8.50.
Part 1 (From the earliest times to A.D. 1750) includes Early textiles, p. 78-81; Medieval textiles and leatherwork, p. 96-102; Textiles and glass, 1500-1750, p. 104-113. Part 2 (The industrial revolution to A.D. 190 includes Synthetic dyes, p. 542-546; Spinning-machiner 1760-1850, p. 558-564; Improvements in weaving, p. 564-566; Spread of textile machinery, to 1850, p. 566-571; Hosiery and lace-making, p. 571-574; The sewing machine, p. 574-576; The textile industries, 1850-190 p. 576-582. (3138)

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

FIBERS A

Natural fibers A1

APPARATUS FOR SEPARATING BAST FIBERS. W. Ziehr (Germany). BP 865 356, Apr. 12, 1961. (3139)

Manmade fibers A2

HEAT RESISTANT VINAL FILAMENTS. Farbwerke Hoechst AG. BP 864 308, Mar. 29, 1961.
An alkali metal phosphate of acid reaction or a condensed alkali metal phosphate of acid, neutral, or alkaline reaction is added to the spinning bath. (3140)

ACRYLIC FIBERS WITH IMPROVED HEAT STABILITY. Courtaulds Ltd. BP 864 312, Apr. 6, 1961.
The resistance to discoloration by heat of acrylic fibers, yarns, and fabrics is improved without adversely affecting dyeability by heating them in an aqueous solution containing an ammonium or alkali metal salt of an aliphatic carboxylic acid having reducing properties, e.g. sodium formate or oxalate. (3141)

GRAFT COPOLYMERS OF CELLULOSE ACETATE FIBERS. Soc. des Usines Chimiques Rhone-Poulenc. BP 865 263, Apr. 12, 1961.
Fibers with reduced sensitivity to water and solvents and enhanced resistance to ultraviolet light are obtained by impregnating acetate filaments or fabrics with a chemical initiator of addition polymerization, e.g. organic peroxide, and exposing the impregnated material to the vapor of an addition polymerizable monomer (e.g. vinyl or vinylidene derivative, styrene, an acrylate or methacrylate, or acrylonitrile) diluted with the vapor of a nonreactive substance. (3142)

MATT CELLULOSE ESTER FIBERS. Wacker-Chemie GmbH and Cassella Farbwerke Mainker AG. BP 866 508, Apr. 26, 1961.
Matt acetate fibers are obtained by incorporating small amounts of melamine formaldehyde condensates in the spinning bath and treating the spun filaments with hot air, water, or steam. (3143)

MANUFACTURE OF CELLULOSE TRIACETATE BY ACETYLATION OF REGENERATED CELLULOSE FIBERS. Soc. de la Viscose Suisse. BP 868 019, May 17, 1961.
The acetylation of the fibers with retention of the fiber structure is accomplished by the treatment of water-swollen fibers with glacial acetic acid containing acetic anhydride. (3144)

PILLING RESISTANT POLYESTER FIBERS. E. I. du Pont de Nemours & Co. BP 868 497, May 17, 1961.
By controlling the relative viscosity of the polyethylene terephthalate spinning solution to values of 14.0 to 17.0, staple fibers of high pilling resistance are obtained. (3145)

YARN PRODUCTION B

HEATING ELEMENTS FOR YARN PROCESSING. Moulinage et Retorderie de Chavanoz. BP 853 545, Nov. 9, 1960. Through BCIRA 41: 1432 (1961).
The exit end of a tubular heater tube is expanded to take a short piece flush with the main tube. If a deposit of condensed vapor forms, this short piece is removed and replaced by a similar piece. (3146)

APPARATUS FOR HEAT SETTING CRIMPED YARN. R. S. Gilchrist and D. A. E. Mattingly (to Klinger Mfg. Co. Ltd). BP 864 078, Mar. 29, 1961.
The invention is primarily concerned with the heat treatment of yarns as a step in the false-twist crimping process. (3147)

CONTINUOUS HEAT STRETCHING APPARATUS FOR LINEAR POLYESTER OR POLYOLEFIN FILAMENTS. Farbwerke Hoechst AG. BP 864 530, Apr. 6, 1961. (3148)

OILING DEVICE FOR WOOL FIBERS. W. M. Oddie (to Spencer & Halstead Ltd). BP 865 520, Apr. 19, 1961.
The feed lattice of the opening machine from which the fibers pass to an oiling unit is provided with means which gages the amount of material to be oiled and controls the amount of oil from the spray nozzles accordingly. (3149)

PROCESS FOR THE HEAT STRETCHING OF POLYACRYLONITRILE FILAMENTS. Farbenfabriken Bayer AG. BP 865 897, Apr. 19, 1961.
Uniform, smooth filaments result by imparting to the yarn during the heat-stretching a low false twist, so that permanent crimping is avoided. (3150)

LOADING MECHANISM FOR YARN CONDITIONER. Paramount Textile Machy. Co. BP 867 676, May 10, 1961.
Elevator for loading cones of yarn into a conditioner. (3151)

APPARATUS FOR CONTINUOUSLY PROCESSING NYLON YARNS. E. C. Neu and J. W. Panel (to Hudson Hosiery Co.). USP 2 977 745, Apr. 4, 1961.
Apparatus for twisting, heat-setting, shrinking, and smoothing the surface of nylon yarn in a continuous operation. (3152)

COMBINED EDGE CRIMPING AND HEAT TREATING APPARATUS FOR STRETCH YARN PRODUCTION. N. E. Klein and C. G. Evans (to Deering Milliken Research Corp.). USP 2 977 746, Apr. 4, 1961. (3153)

Carding and combing B2

APPARATUS FOR AUTOMATICALLY DOFFING AND REPLACING SLIVER COILER CANS. Hanseatische Motoren GmbH. BP 865 820, Apr. 19, 1961. (3154)

Drawing and roving B3

ELECTRIC SWITCH FOR ROVING FRAMES STOP MOTION. Parks-Cramer Co. BP 865 458 and 865 459, Apr. 19, 1961.
The builder motion of the fly frame includes means for opening the normally closed switch prior to periods of reversal to prevent undesired stoppages. (3155)

CLEARER MECHANISM FOR ROVING DRAFTING MECHANISMS. Estirajes Balmes SA. BP 865 561, Apr. 19, 1961.
The mechanism consists in a combination of fixed and revolving clearing members. The fixed clearer is in direct contact with the drafting roll or belt and is arranged so that the fiber waste accumulates at one edge of the clearer, separated from the roving, and is continuously removed by the revolving clearer. (3156)

FALSE TWIST INSERTION IN SLIVER DURING CROSS WINDING IN DRAWING. Hanseatische Motoren GmbH. BP 865 994, Apr. 26, 1961.
Drive arrangement for reversing the direction of rotation of the false twist tube at a point intermediate between the end positions of the traverse movement. (3157)

SLIVER UNIFORMITY CONTROL DURING DRAFTING. Brit. Northern Electrical Appliances. BP 866 491, Apr. 26, 1961.
Mechanism for controlling sliver thickness by varying the relative speed of the drafting rolls in accordance with departures from a predetermined standard of thickness. (3158)

Spinning, winding, twisting B4

FILAMENT WINDING APPARATUS. Wahl Bros. (Canada). BP 853 454, Nov. 9, 1960. Through BCIRA 41: 1418 (1961).
Apparatus for simultaneously winding two filaments in opposite directions about a mandrel from mechanisms that rotate in intersecting paths. (3159)

RING SPINNING AND TWISTING DEVICES. C. Delesalle (France). BP 853 906, Nov. 9, 1960. Through BCIRA 41: 1430 (1961).
Means for producing a first partial twist in a yarn before it is wound on a ring spindle. See also abstr. 2921/59. (3160)

SPINNING OR TWISTING SPINDLE. J. J. Keyser (Switzerland). BP 863 918, Mar. 29, 1961.
A retaining device for guarding against the lifting of the spindle top consists of two elements, one rigid and the other elastically deformable so that the spindle top can be secured or released only by an axial movement. The device is housed either within the spindle top or the fixed base or mounting. (3161)

POSITIVE CENTRIFUGAL CLUTCH FOR TWISTING SPINDLES. Prince-Smith & Stells Ltd. BP 864 000, Mar. 29, 1961. (3162)

SPINNING AND TWISTING MACHINES. Württ Spindelfabrik GmbH. BP 867 359, May 3, 1961.
The spindles, drives, and pulleys are arranged in groups in separate boxlike housings which can be easily removed or reinstalled in the machines. (3163)

YARN TENSION CONTROL FOR PLYING APPARATUS. Deering Milliken Research Corp. BP 864 477 and 864 478, Apr. 6, 1961.
The apparatus employs a dynamic tension control device for each of the strands being plied which is responsive to the rate of plying. (3164)

FALSE TWISTING DEVICE FOR CONDENSING ROVING IN DRAFTING FRAMES OF SPINNING MACHINES. J. J. Rieter & Cie AG. BP 864 819, Apr. 6, 1961. (3165)

SPINNING SPINDLE MOUNTING. T. M. M. (Research) Ltd. BP 865 494, Apr. 19, 1961.
The spindle blade is rotatably mounted in a bolster by means of spaced journal and footstep bearings. The journal bearing is, in turn, mounted in the bolster by means of axially spaced members located wholly below and above the journal bearing to dampen vibrations. (3166)

LUBRICATION MEANS FOR SPINNING AND TWISTING SPINDLES. T. M. M. (Research) Ltd. BP 865 546, Apr. 19, 1961.
The lubricant is propelled through the hollow interior of the bolster mounting to the upper bearing by the rotation of the spindle blade. (3167)

PLASTIC TRAVELERS WITH WEAR RESISTANT INSERTS. J. & P. Coats Ltd. BP 865 701, Apr. 19, 1961. (3168)

MACHINE FOR WINDING UNTWISTED CONTINUOUS FILAMENTS AFTER STRETCHING. Barmer Maschinenfabrik AG. BP 865 905, Apr. 19, 1961. (3169)

ATTACHMENT FOR SPINNING, DOUBLING, AND TWISTING MACHINES TO PREVENT DOUBLE ENDS. Gaunt, Rhodes, & Bower Ltd. BP 866 180, Apr. 26, 1961. (3170)

DRAFTING ROLL MOUNTING FOR SPINNING FRAMES. Thomas Ryder & Son Ltd. BP 866 269, Apr. 26, 1961.
The invention relates to a center shaft inserted into a pair of nylon bushings in contact with the rolls and a center member around the shaft extending between the rolls which engages the nylon bushings. (3171)

YARN BREAKAGE DETECTOR AND CONTROL FOR TWO-FOR-ONE TWISTING MACHINES. Prince-Smith & Stells Ltd. BP 867 106, May 3, 1961.
Means for automatically rupturing the remaining intact yarn in the event of breakage of, or failure in the supply of, one of the yarns. (3172)

APPARATUS FOR ALIGNING BOBBINS FOR STRIPPING. Deering Milliken Research Corp. BP 867 671, 867 672, and 867 673, May 10, 1961. (3173)

YARN GUIDE FOR SPINNING MACHINES. T. M. M. (Research) Ltd. BP 868 740, May 25, 1961.
Means for guiding the yarn between the delivery point of the front drafting rolls and the traveler or flyer so that the tension and twist of the yarn are controlled to enhance the yarn strength and prevent breakage. (3174)

MEANS FOR RENEWING STOCK OF TRAVELERS IN A DEVICE FOR SUPPLYING TRAVELERS TO THE RINGS OF RING SPINNING OR DOUBLING FRAMES. Bracker AG. BP 868 789, May 25, 1961. (3175)

Yarns B5

BULKED YARNS. P. G. Noble and A. A. Martin (to R. P. Lawson & Sons Ltd). BP 853 806, Nov. 9, 1960. Through BCIRA 41: 1431 (1961).
Apparatus for bulking yarn of the nylon and Terylene types consists of a guide tube flush with a heater tube, a radical bore in the guide tube through which yarn passes into the heater tube, and a rod carrying a needle and rotating in a longitudinal bore of the guide tube with the needle in the heater tube. The yarn coils around the needle and is pushed along to the exit where it is collected and wound on a package. (3176)

BULKING OF YARNS. G. H. Heath & Co. Ltd. BP 865 117, Apr. 12, 1961.
Fluffy or hairy yarns resembling wool is prepared by heat treating multifilament yarns to form randomly spaced loops (see abstr. 3747/60) and abrading the resultant yarn to rupture the loops. (3177)

SYNTHETIC FILAMENT ROPE. Vereinigte Glanzstoff Fabriken AG. BP 867 283, May 3, 1961.
Covered core construction in which the core consists of parallel strands held together by one or more layers of braided filaments. (3178)

METHOD AND APPARATUS FOR PROCESSING WEFTLESS TIRE CORD. Olympic Tyre & Rubber Co. Proprietary Ltd. BP 868 954, May 25, 1961.
Specified widths of cord for the manufacture of bicycle tires by the Monoband method are carried out in a single operation by passing parallel cords upwards through a tank containing rubber solution to form a coating joining the cords and stabilizing the coating. (3179)

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

WARPING MACHINERY. W. Bonnell (to Courtaulds Ltd). BP 853 560, Nov. 9, 1960. Through BCIRA 41: 1443 (1961).
In sectional warping from a swift (wound from packages on a creel) the swift is fitted with a constant-speed reversible drive and the beam with a constant-torque, slipping drive comprising a hydraulic coupling. Beaming follows under light tension, and the danger of overrunning or snatching is avoided. (3180)

GUIDE RAIL FOR BOBBIN WINDING MACHINES. W. Reiners (Germany). BP 864 022, Mar. 29, 1961.
In a machine for winding bobbins from cops, each yarn extending between a cop and a guide element is deflected out of a straight path by means of a rail to prevent ballooning and permit high speed operation. (3181)

CONE WINDING MACHINE. Arundel Coulthard & Co. Ltd. BP 868 664, May 25, 1961.
Means for tilting the cone with relation to its driving drum as the cone is built up so that the length of contact of the cone and drum remains substantially constant as the winding proceeds. (3182)

JUTE CROSS-WINDING MACHINE. James Mackie & Sons Ltd. BP 864 648, 864 653, 864 654, and 864 700, Apr. 6, 1961.
The inventions relate to machines in which the roll being wound is circulated around an endless track. BP 864 648 and 864 700 cover an automatic doffing mechanism; BP 864 653 covers a yarn actuated stop motion; BP 864 654 covers a knotting mechanism. (3183)

TENSION COMPENSATOR FOR YARN UNWINDING. Michele Ratti SpA. BP 864 716, Apr. 6, 1961.
The device consists of two elements, one mounted on the upper end of the reel to hold the yarn away from the upper flange of the unwinding reel in normal operation and the other is placed above the first device to vary the inclination of the yarn to compensate for tension variations during unwinding. (3184)

STRIPPING DEVICE FOR LOOM WEFT BOBBINS. G. Rohl (Germany). BP 865 063, Apr. 12, 1961.
See abstr. 3356/60. (3185)

HIGH SPEED BOBBIN WINDING MACHINE. W. Reiners (Germany). BP 865 187, Apr. 12, 1961.
The yarn unwound from a cop onto a bobbin is passed through a tube or axially spaced ring, the axis of which is coincident with an extension of the cop axis. This yarn confining element restricts ballooning and enables yarn to be wound at speeds of 3200 ft/min using cops with normal build. (3186)

NYLON YARN GUIDES WITH CERAMIC INSERTS. Ace Eng. Co. BP 867 332, May 3, 1961. (3187)

DEVICE FOR SNARL PREVENTION DURING YARN WITHDRAWAL FROM PACKAGES. Courtaulds Ltd. BP 867 340, May 3, 1961.
The package is surrounded by a pleated material which provides a number of line contacts with the package to prevent overrunning without impeding yarn withdrawal. (3188)

CONSTANT TENSION DEVICE FOR UNREELING MACHINE. Regie Nationale des Usines Renault. BP 867 482, May 10, 1961. (3189)

Weaving C2

AUTOMATIC CHARGING DEVICE FOR WEFT PIRN CHANGERS. G. Fischer AG. BP 853 565, Nov. 9, 1960. Through BCIRA 41: 1446 (1961).
When a pirn is located in a pirn-changing position, a blow nozzle attached to an elastic hose moves forward to blow the weft end off the pirn towards a holding device comprising a suction tube and clamping device. (3190)

POLYURETHANE PICKER WITH REPLACEABLE BEARINGS. Dunlop Rubber Co. Ltd. BP 864 223, Mar. 29, 1961. (3191)

PATTERN MECHANISM FOR LOOM DOBBY. Sdruzeni Podniku Textilniho Strojirenstvi. BP 868 094, May 17, 1961.
The pattern mechanism eliminates the use of the usual endless chain and consists of an endless series of rollers supported by rotary means and a follower member, connected by a linkage system to the dobby, which engages the rollers to effect movement of the linkage system. (3192)

DOBBIES. I. H. Thomas and A. Wrzesien (to Brit. Cotton Ind. Research Assoc.). BP 853 856, Nov. 9, 1960. Through BCIRA 41: 1444 (1961).
The invention relates to a simplification of the positive, double-lift, open-shed dobby mechanism claimed in BP 733 777 especially of the front and back stop arrangements and hook construction. Further, provision is made for the adjustment of the warp shed size and for equalizing the warp tension when the loom is idle. (3193)

LOOM WARP TENSION DEVICE. J. S. Plenderleith (to Jute Inds. Ltd). BP 864 928, Apr. 12, 1961.
In looms having two warp beams operating in unison, means for automatically equalizing the warp tension from each warp beam. (3194)

BOBBIN-CHANGE MECHANISM FOR DOUBLE-SHED LOOMS. T. A. Güsken (Germany). BP 865 655, Apr. 19, 1961.
Stationary bobbin-change motions are provided at each side of the loom for replacing the pirns in the upper and lower shed shuttles, respectively. (3195)

NYLON PIRN CLIP AND PEG HEAD PAD FOR SHUTTLES. John Taylor (Shuttles) Ltd. BP 865 981, Apr. 26, 1961. (3196)

SPOOL SETTING FRAME FOR AXMINSTER CARPET LOOMS. R. C. Perry (England). BP 866 370, Apr. 26, 1961. (3197)

AUTOMATIC NIPPER TEMPLE FOR LOOMS. C. Masolo (Italy). BP 866 650, Apr. 26, 1961.
The temples are mounted on a loom at both selvages to stretch the fabric transversely while simultaneously cutting the residual fringelike weft threads. (3198)

LINEAR INDUCTION MOTORS FOR SHUTTLE PROPULSION. Nat. Research Develop. Corp. BP 866 772, May 3, 1961. (3199)

NYLON LOOM PICKERS. A. Morell Arnal (Spain). BP 866 796, May 3, 1961.
The areas contacted by the shuttle are reinforced with glass fibers. (3200)

ELECTRICALLY CONTROLLED YARN SELECTOR MEANS FOR AXMINSTER SPOOL SETTING MACHINES. P. W. Robinson (England). BP 867 861, May 10, 1961. (3201)

LOOM PATTERN SELECTOR BAR. Premier Lamp & Eng. Co. Ltd. BP 868 426, May 17, 1961.
Means for supporting selector pins to prevent inaccurate or sideways movement. (3202)

WARP TENSION DEVICE FOR LOOMS. J. Zmatlik and M. Jisa (Czechoslovakia). BP 868 499, May 17, 1961.
The eyelets of the heddles are retained at a constant distance from the shed and flexible means, extending from a point adjacent the eyelets to a fixed point on the loom, maintains constant length and tension in the warp yarns. (3203)

FORMATION OF SELVAGES. R. Dewas (France). BP 868 437, May 17, 1961.
The warp yarns are bound by means of an auxiliary thread in the shape of a hairpin, the two shanks of which are inserted into different sheds and beaten up together with the weft yarns. (3204)

Knitting C3

CIRCULAR HOSIERY MACHINE. Santoni & Co. BP 864 151, Mar. 29, 1961.
Mechanism for preventing the formation of changing diagonals in twin feed tuck patterning machines. (3205)

CIRCULAR HOSIERY MACHINE. VEB Rund-und Flachstrick-Maschinenbau. BP 865 092, Apr. 12, 1961.
In a machine for the production of closed toe hosiery having a semi-annular bar with transfer points for combining the toe and instep course on the same needles, the stocking is knit from the welt. The transfer points, after completion of the toe, transfer the loops of the last course of the instep to the toe needles and a linking device draws sewing yarn into the combined loops. (3206)

STITCH SIZE CONTROL MECHANISM FOR CIRCULAR HOSIERY MACHINES. Scott & Williams, Inc. BP 865 177, 865 178, 865 179, 865 180, 865 181, and 865 182, Apr. 12, 1961. (3207)

CIRCULAR KNITTING MACHINE FOR PRODUCING EYELET FABRIC. Mellor Bromley & Co. Ltd. BP 865 363, Apr. 12, 1961. (3208)

FASHIONING CONTROL FOR STRAIGHT-BAR KNITTING MACHINE. S. A. Monk (to S. A. Monk Ltd). BP 865 364, Apr. 12, 1961. (3209)

DRIVE FOR DOMESTIC FLAT BED KNITTING MACHINES. O. M. Seman (England). BP 865 500, Apr. 19, 1961. (3210)

CHANGE SPEED MECHANISM FOR CIRCULAR HOSIERY MACHINES. Bentley Eng. Group Ltd. BP 865 728, Apr. 19, 1961. (3211)

MANUFACTURE OF NEEDLE CYLINDERS FOR CIRCULAR HOSIERY MACHINES. Sdruzeni Podniku Textilniho Strojirenstvi. BP 865 875, Apr. 19, 1961.
The steel ribs which act as a lateral guide for the needles are secured in the end walls of the needle cylinder by punching out rings provided for the purpose during the machining of the cylinders. (3212)

STOP MOTION INTERRUPTER DEVICE FOR CIRCULAR KNITTING MACHINES. Zapadomoravske Strojirny Narodni Podnik. BP 866 120, Apr. 26, 1961. (3213)

YARN SEVERING DEVICE FOR CIRCULAR HOSIERY MACHINES. G. Billi (Italy). BP 867 132, May 3, 1961.
A suction device is associated with each yarn feed to hold the free yarn ends out of the path of the needles in preparation for severing. (3214)

CIRCULAR HOSIERY MACHINE STITCH LENGTH CONTROL. Patent-Hose Corp. BP 867 155, May 3, 1961. (3215)

STRAIGHT BAR KNITTING MACHINES. Wildman Jacquard Co. BP 867 391, May 10, 1961.
Means for selectively knitting jersey and rib fabric automatically. (3216)

CIRCULAR KNITTING MACHINE STRIPING MECHANISM. Singer-Fidelity Inc. BP 867 412, May 10, 1961. (3217)

APPARATUS FOR YARN LUBRICATION ON HOSIERY MACHINES. C. Barrois (Belgium). BP 867 624, May 10, 1961. (3218)

CIRCULAR HOSIERY MACHINES. Trent Eng. Co. Ltd. BP 867 651, May 10, 1961.
Single cylinder machine for the continuous production of hosiery which provides for an anti-run back course at the completion of the toe pocket, a drawthread course, and a welt and elastic insert at the start of the next stocking. (3219)

FLAT BED KNITTING MACHINE. Paliz-Holding AG. BP 867 678, May 10, 1961.
The rocking of the pressure device for holding down the fabric loops changes in response to the direction of the cam movement without the aid of additional mechanisms. (3220)

TOE FORMATION ON CIRCULAR HOSIERY MACHINE. H. Wignall, K. R. Wignall, and B. D. Wignall (England). BP 868 423, May 17, 1961.
At the beginning of the toe, a change to 1 x 1 rib knitting is effected with concomitant reduction of stitch length while rotary knitting is continued. (3221)

HEATING DEVICE FOR CIRCULAR HOSIERY MACHINES. Atkins Bros. (Hinckley) Ltd. BP 868 428, May 17, 1961.
The device is attached to the frame of the machine to apply heat to the conductive parts and warm up the machine to its working temperature. (3222)

CARRIER DRIVE MECHANISM FOR STRAIGHT BAR KNITTING MACHINES. William Cotton Ltd. BP 868 714, May 25, 1961.
Slipping clutch for holding and releasing a section of the gearing to couple and uncouple the carrier bar and drive and to permit rotational slip of the section when the traverse of the carrier bar is stopped. (3223)

TWO-WAY STRETCH KNITTED FABRIC. H. Seghezzi (Germany). USP 2 979 928, Apr. 18, 1961.
Composite fabric produced by interknitting a rib fabric of bulk yarn with a fabric of a crimped stretch yarn to form an intermediate layer of the latter between two layers of the former. (3224)

METHOD OF FORMING HEEL POUCH IN SEAMLESS HOSIERY. J. M. R. Reymes-Cole and B. T. R. Reymes-Cole (to Singer-Fidelity, Inc.). USP 2 980 981, Apr. 25, 1961.
The entire stocking is formed by rotational knitting of thermoplastic yarn, and the heel pouch is shaped by heat-setting on a form. (3225)

WARP GUIDE MECHANISM FOR WARP KNITTING MACHINES. A. W. H. Porter (to Hobourn F. N. F. Ltd). USP 2 978 887, Apr. 11, 1961.
The warp guides are moved so that both lapping and shogging movements take place while the guides are in front of the needles and the sinker nebs are in engagement between the warp yarns. Thus the warp yarns run obliquely along the row of needles from the tops of the nebs instead of from the knockover edges, preventing yarn splitting or neb engagement between the wrong pair of yarns. (3226)

JACQUARD FABRIC PRODUCTION ON SUPERPOSED CYLINDER CIRCULAR KNITTING MACHINES. F. W. Wakefield (to Scott & Williams, Inc.). USP 2 979 927, Apr. 18, 1961.
The jack selecting means associated with a cylinder for producing rib stitches is constructed so that it controls the needles in the other cylinder to produce selective knitting and floating. The patterns are provided on the frame needles while rib knitting takes place continuously at two feeds. (3227)

LOOSE COURSE ATTACHMENT FOR CIRCULAR HOSIERY MACHINES. P. A. Mahler and P. J. Haas (to Singer-Fidelity, Inc.). USP 2 981 085, Apr. 25, 1961.
Mechanism which provides for the formation of a loose course at any point in the fabric and which is independent of the pattern cylinder which controls the sequential operation of the machine. (3228)

METHOD OF KNITTING SHAPED COLLARS WITH INTEGRAL TAPERED EDGES. S. Ludwig. USP 2 981 086, Apr. 25, 1961. (3229)

LACE FABRIC WITH INTEGRAL BACKING LAYER. E. Sutter and H. Rubin (to Native Laces & Textiles, Inc.). USP 2 981 139, Apr. 25, 1961. (3230)

Fabrics C4

PLASTIC SEALS FOR ATTACHMENT TO FABRIC SELVAGES. L. G. Stanley (to A. Stanley & Sons Ltd). BP 853 434, Nov. 9, 1960. Summary in BCIRA 41: 1485 (1961). (3231)

MULTI-NEEDLE TUFTING MACHINES. J. L. Card. BP 853 527 and 853 528, Nov. 9, 1960. Through BCIRA 41: 1447 (1961).
Electromagnetic means for producing designs in tufted fabrics by withholding selected needles or groups of needles from penetrating the base fabric at selected times while the remaining needles are allowed to pierce the fabric at each stroke of the needle bar. (3232)

TUFTED PILE FABRICS. J. L. Card. BP 853 747, Nov. 9, 1960. Through BCIRA 41: 1449 (1961).
Patterned tufted pile fabrics in which the effects are obtained by combining cut pile of a uniform height with loop pile of one or two heights, shorter than the cut pile. A base fabric is run through a stitching device. (3233)

MULTI-NEEDLE TUFTING MACHINES. J. L. Card. BP 853 748, Nov. 9, 1960. Through BCIRA 41: 1448 (1961).
The invention relates to a needling machine in which some needles are provided with hooks for forming loop pile in addition to the cut pile. (3234)

TUFTED PILE FABRICS. J. L. Card. BP 853 749, Nov. 9, 1960. Through BCIRA 41: 1450 (1961).
The fabrics have straight or wavy lines, all running in the same direction, of cut pile and loop pile of the same or different heights. (3235)

ZIPPER TAPES. Cuckson Textiles Proprietary Ltd. BP 853 867, Nov. 9, 1960. Through BCIRA 41: 1452 (1961).
Means for weaving in a marginal rib (to which the zip elements are anchored) during the weaving of the selvage of the tape. (3236)

MULTI-PLY PILE FABRICS FOR CARPETS AND UPHOLSTERY. U. S. Rubber Co. BP 863 926, Mar. 29, 1961.
Method of interweaving in one operation highly shrinkable yarns with nonshrinkable soft and stiff yarns into a multiple layer fabric and heating to cause shrinkage of the shrinkable yarns, corrugation of the stiff yarns, and concurrent formation of a pile surface by buckling of the soft yarns in the upper layer. The resultant fabrics are soft and resilient without requiring the use of foam or sponge rubber backing. (3237)

BONDED NONWOVEN FABRICS. C. Harmon. BP 864 246, Mar. 29, 1961.
Nonwoven fabrics possessing soft hand and drape, as well as excellent elasticity and stretch, are obtained by intermittently bonding the fabric web with a predetermined pattern of binder areas and selectively crimping the unbonded areas. (3238)

RADIATION MOLDING OF GLASS FIBER POLYVINYL CHLORIDE LAMINATES. T. I. (Group Services) Ltd. BP 865 378, Apr. 19, 1961.
A glass fiber mat is impregnated with a mixture of polyvinyl chloride and a polymerizable monomer which acts as a plasticizer. The resulting blend is subjected to ionizing radiation to cause cross-linking of the monomer and the polyvinyl chloride and produce a rigid laminate. (3239)

COMBINED SIZING AGENT AND ADHESIVE FOR GLASS FIBERS IN REINFORCED LAMINATES. Allmanna Svenska Elektriska AB. BP 865 380, Apr. 19, 1961.
The composition claimed makes possible the use of a single treatment for simultaneously lubricating the glass fibers and increasing their adhesion to the resin to be reinforced. (3240)

METHOD OF PREPARING VINYL PLASTIC LAMINATED FABRICS. Lembo Mach. Works. BP 865 400, Apr. 19, 1961. (3241)

LABELING TEXTILE ARTICLES. G. H. R. Fawcett (England). BP 865 736, Apr. 19, 1961.
The labels are made in strip form so as to have two selvage edges. They are cut to length from the strip, the cut ends are turned in, and a piece of double-faced thermoplastic adhesive is used between the label and fabric to permit attachment by heat and pressure. (3242)

RESILIENT RUBBERIZED UPHOLSTERY WEBBING. Dunlop Rubber Co. Ltd. BP 866 744, Apr. 26, 1961.
Continuous webbing free of joints is made by embedding a loosely woven fabric in an elastomer and cutting the resultant product into strips in which the warp threads run parallel to the length of the strip. (3243)

GAS FILTERS. Carl Freudenberg KG. BP 866 059, Apr. 26, 1961.
Highly porous, self-supporting, bonded carded fiber web. (3244)

IMITATION FUR FABRIC EDGING. A. Gaitz-Hocky (France). BP 866 893, May 3, 1961.
Strips of the pile fabric are fastened to a tubular tape reinforced with a flexible core of foam or felt. (3245)

TIRE CORD FABRIC. Firestone Tire & Rubber Co. BP 866 945, May 3, 1961.
A self-adhesive coating is applied to the fabric, extending beyond the squared outer edges, to facilitate butt-splicing. (3246)

LACE FABRICS. Nat. Research Develop. Corp. BP 867 088, May 3, 1961.
See abstr. 5084/60. (3247)

COTTON MESH BAG MANUFACTURE. Firmin & Co. (London) Ltd. BP 867 319, May 3, 1961. (3248)

BONDED NONWOVEN FABRICS. Rohm & Haas Co. BP 867 545, May 10, 1961.
Wash and solvent-resistant fabrics are obtained by the use of a bonding agent consisting of a cross-linked epoxy addition polymer and an aminoplast condensate. (3249)

NONWOVEN FABRICS. B. Romanin (Italy). BP 867 946, May 10, 1961.
The fabric is made by bonding two sets of longitudinally arranged yarns (one of which forms an undulating pattern) to each other. (3250)

NARROW WOVEN FABRICS FOR STIFFENING GARMENTS. Selectus Ltd. BP 868 102, May 17, 1961.
The fabric includes, as part of its warp, stiff nylon or similar plastic monofilaments and one or more longitudinal areas free from such monofilaments. (3251)

MEANS FOR FORMING A SCULPTURED TUFTED FABRIC. H. R. Mushlian (to Russell-Lacey Mfg. Co.). BP 868 174, May 17, 1961. (3252)

TUFTING MACHINE. J. A. Cobble, Sr. and J. A. Cobble, Jr. BP 868 232, May 17, 1961. (3253)

BONDING AGENT FOR PRODUCING DISCOLORATION AND WASH RESISTANT NONWOVEN FABRICS. Rohm & Haas Co. BP 868 335, May 17, 1961. (3254)

TRANSLUCENT FILMS REINFORCED WITH CROSS-LAID YARNS. Winterbottom Book Cloth Co. Ltd. BP 868 410, May 17, 1961. (3255)

WEAVING PILE CARPETS WITH DOUBLE WIRE MOTION. F. W. E. Hoeselbarth (to C. H. Masland & Sons). USP 2 981 292, Apr. 25, 1961.
Method of supporting and strengthening the pile in Wilton carpets by staggering a series of pile projections formed over upper wefts with a series of pile projections formed over the next lower wefts so that the mutually supporting projections occur in the same cycle. (3256)

INSTALLATION FOR MANUFACTURING BONDED NONWOVEN FABRICS. La Manufacture de Feutres de Mouzon. BP 868 454, May 17, 1961.
A carded fiber web is cut into particles which are collected on a movable endless belt in the form of a sheet and sprayed with a binder. (3257)

MACHINE FOR CUTTING AND WINDING COTTON WOOL FLEECE INTO PADS. F. Wieser (Austria). USP 2 977 644, Apr. 4, 1961. (3258)

CARPET TUFTING MACHINE. J. A. Cobble, Sr. and J. A. Cobble, Jr. USP 2 977 905, Apr. 4, 1961.
Unitary needle plate and stripper arrangement which is adjustable in a vertical direction to facilitate machine adjustments in obtaining variations in pile heights. (3259)

DIAPER. N. L. Seltzer (to Kendall Co.). USP 2 977 997, Apr. 4, 1961.
A reduced tendency to raveling at the pinked edge is produced by the use of a birdseye body portion and a plain weave bar portion with a greater number of filling yarns per inch than that of the body. (3260)

BONDED BATTING OF CRIMPED ACETATE FIBERS. L. P. Wenzell, Jr. and L. G. Lovin, Jr. (to Celanese Corp.). USP 2 978 785, Apr. 11, 1961.
The batting is needled to interlock the fibers and treated with polyvinyl acetate to bond the fibers together at their points of contact. (3261)

NONWOVEN FABRICS. R. G. Turner (to Crompton & Knowles Corp.). USP 2 978 786, Apr. 11, 1961.
The fabric is formed by feeding two fiber webs into face to face contact and gathering fibers from each of the webs to form interconnecting, knitted loops. (3262)

WOVEN SYNTHETIC FIBER SURGICAL TUBES. W. J. Liebig (to Meadox Medicals, Inc.). USP 2 978 787, Apr. 11, 1961.
The surgical tubes, suitable for grafts or implants, are composed of fabric plies integrally joined into a tube by longitudinal woven-in sealing seams formed by warp crossings. (3263)

FUR-LIKE WOVEN FABRICS. W. R. Keen (to Collins & Aikman Corp.). USP 2 979 803, Apr. 18, 1961.
To achieve the effect of guard hair and underfur, the fabric is woven from pile yarns formed by plying or twisting different types of yarn in such a way that after cutting two clearly defined pile levels are produced. (3264)

WEAVING A 2-SHOT MULTIFRAME VELVET CARPET. R. B. Patterson and H. J. Smiley (to James Lees & Sons Co.). USP 2 981 291, Apr. 25, 1961.
The weave provides satisfactory coverage and pile yarn density utilizing a minimum length of unexposed pile yarns, since the yarns are tied in under every fourth instead of every second filling weft. (3265)

RAVEL RESISTANT NAPPED LENO FABRIC. J. H. Rogers (to Beacon Mfg. Co.). USP 2 981 297, Apr. 25, 1961.
The leno weave is used for holding the filling threads at the cut edge portions of the fabric. (3266)

FINISHING D

APPARATUS FOR CONTINUOUSLY SUBJECTING TEXTILES TO A SERIES OF FINISHING TREATMENTS. J. Tapias Cerda (Spain). BP 863 619, Mar. 22, 1961.
Textiles may be continuously subjected to bleaching, dyeing, washing, mercerizing, steaming, and drying by wrapping them in superposed layers on the perforated surface of a drum rotatably mounted in a closed vessel into which the treating liquid for wet processing, hot air for drying, or steam are introduced as required and rapidly rotating the drum to effect transport of the treating fluid into the interior of the drum and outward through the perforations. (3267)

Chemical processes D1

ANTISTATIC COATED FABRIC. D. Bulgin (to Dunlop Rubber Co. Ltd). BP 853 186, Nov. 2, 1960. Through BCIRA 41: 1286 (1961).
The invention relates to fabric that does not generate static charges. The basic material contains fibers or filaments that are loaded with electrically conducting carbon black. The fabric is intended for use in car upholstery, conveyor belts in mines, operating theaters, etc. (3268)

PROCESS FOR THE IMPROVEMENT OF NYLON. Boehme Fettchemie GmbH. BP 853 332, Nov. 2, 1960. Through BCIRA 41: 1266 (1961).
Nylon materials (staple fiber, yarn, taffeta, film) are rendered antistatic, hydrophilic, and more easily dyed, without loss of strength, by reaction with an oxyalkylating agent, e.g. ethylene oxide or epichlorhydrin. (3269)

MACHINE FOR TREATING ROPE- OR RIBBONLIKE TEXTILE MATERIALS. Maschinenfabrik Benninger AG. BP 853 489, Nov. 9, 1960. Through BCIRA 41: 1481 (1961).
A pressure machine for the wet treatment of textiles in ribbon or rope form has at least one guiding conduit for the material, of such dimensions and shape that it serves to increase the flow resistance of the treatment liquid and build up the pressure. (3270)

IMPROVING THE WATER-ABSORPTION CAPACITY OF NYLON TEXTILES. Farbenfabriken Bayer AG. BP 861 875, Mar. 1, 1961.
Treatment with an aqueous alcoholic or organic acid emulsion of a polyamide of aminocaproic acid and succinic acid glycol polyester is claimed. (3271)

WATERPROOFING COMPOSITION. Chemische Fabrik Pfersee GmbH. BP 862 197, Mar. 1, 1961.
Mixtures of polysiloxanes and condensates of fatty acids and alkanolamines with N-containing aminoplasts (e.g. urea, thiourea, melamine) and formaldehyde. (3272)

BRIGHTENING AGENT FOR ACRYLIC FIBERS. Farbenfabriken Bayer AG. BP 862 286, Mar. 8, 1961.
3-(p-acylaminophenyl)-coumarins are claimed. (3273)

METHOD OF PRODUCING GERMPROOF CELLULOSE ACETATE FIBERS. M. Sesoko (to Sangyoikusei Kabushikikaisha). BP 862 515, Mar. 8, 1961.
An organo-tin compound is added to the acetate spinning solution. (3274)

METHOD OF OPTICALLY BRIGHTENING CELLULOSIC MATERIALS. Ciba Ltd. BP 862 645, Mar. 15, 1961.
A preparation consisting of a finely divided solid polymeric carrier capable of forming fibers, e.g. polyethylene terephthalate or polyacrylonitrile, on which is fixed an optical brightening substance having at least one azole ring. (3275)

OPTICAL BRIGHTENING AGENTS FOR TEXTILES. Soc. de Produits Chimiques et de Synthese. BP 862 851, Mar. 15, 1961.
Derivatives of bis-triazinylaminostilbene disulfonic acid are claimed. (3276)

FLUORESCENT TRIAZOLYL STILBENE OPTICAL BRIGHTENING AGENTS. J. R. Geigy AG. BP 863 164, Mar. 15, 1961. (3277)

APPARATUS FOR SPRAYING HOSIERY ON FORMS. Maschinenfabrik Eugen Bellmann GmbH. BP 863 188, Mar. 15, 1961. (3278)

ORGANIC PHOSPHORUS FLAMEPROOFING AGENTS. Ciba Ltd. BP 863 380, Mar. 22, 1961. (3279)

ROTPROOFING PROCESS FOR CELLULOSE FIBERS. Ciba Ltd. BP 863 514, Mar. 22, 1961.
An aqueous composition containing an aminoplast and a catalyst is applied to the fibers, preferably in the form of filaments, rovings, or yarns, by means of a conventional apparatus used for applying moistening or conditioning agents, and the resultant product is cured without prior drying. (3280)

FLAME RESISTANT COATED NYLON AND POLYESTER FABRICS. Farbwerke Hoechst AG. BP 863 738, Mar. 22, 1961.
Coated fabrics resistant to combustion and to dripping under the action of flames are obtained by the use of a plastisol containing antimony trioxide. (3281)

COMBINED STIFFENING AND WATERPROOFING AGENT. Badische Anilin & Soda-Fabrik AG. BP 863 748, Mar. 29, 1961.
An aqueous solution of a copolymer of methacrylamide and an ester of an ethylenically unsaturated carboxylic acid, e.g. methyl acrylate, mixed with a dispersion of an aqueous alumina gel or zirconium oxide gel is claimed. (3282)

APPARATUS FOR OPEN WIDTH WET PROCESSING OF FABRICS. E. Kusters (Germany). BP 863 773, Mar. 29, 1961.
Apparatus consisting essentially of two coated glass fabric conveyor belts and means for folding the fabric onto one of the belts. The belts are separated by a distance which is less than the depth of each fold so that the folds are held together in a stacklike formation. (3283)

APPARATUS FOR THE WET PROCESSING OF TEXTILES IN ROPE FORM. Brit. Celanese Ltd. BP 864 092, Mar. 29, 1961.
In the machine described, satisfactory propulsion of the fabric is achieved under low fabric tension and air entrapment is minimized by the use of a winch roller wholly or partially submerged in the treatment liquid and by the use of air jets to create a flow of the liquid to assist fabric movement. (3284)

CONTINUOUS CHLORITE BLEACHING. M. Stoffel (Switzerland). BP 864 230, Mar. 29, 1961.
The process consists of impregnating the fabric with an inactive chlorite solution containing a potentially acid salt, squeezing out the excess solution, and heating to acidify and activate the remaining solution by the decomposition of the salt. (3285)

NEW COPOLYMERS, THEIR MANUFACTURE AND USE. Ciba Ltd. BP 864 311, Apr. 6, 1961.
The use of copolymers of polymerizable or copolymerizable aliphatic acids, e.g. acrylic acid, with an N-substituted acrylic acid amide as an antistatic finish for synthetic fiber fabrics is claimed. (3286)

CREASEPROOFING CELLULOSE FABRICS. Chemische Fabrik Duren GmbH. BP 864 432, Apr. 6, 1961.
Creaseproof cellulose fabrics with unimpaired tensile strength and resistance to abrasion and chlorine retention are obtained by the use of urea and melamine formaldehyde resins whose 3-dimensional structure is modified to a more linear one. (3287)

STABLE HOUSEHOLD DETERGENT BLEACHING COMPOSITIONS. Unilever Ltd. BP 864 798, Apr. 6, 1961.
Free-flowing solid bleach for use with detergent powder bases consists of an inorganic persalt and a solid reactive organic ester of an aliphatic carboxylic acid, e.g. acylated phenol sulfonate, having the particle size specified. (3288)

FLUORINATED ORGANOSILICON OIL REPELLENT AGENTS. Midland Silicones Ltd. BP 864 848, Apr. 6, 1961. (3289)

OPTICAL BRIGHTENING AGENTS FOR CELLULOSE-CONTAINING MATERIALS. Ciba Ltd. BP 864 900, Apr. 12, 1961.
Water-soluble compounds, exhibiting fluorescence in ultraviolet light, and containing at least one triazine ring substituted by (1) two halogen atoms or (2) one halogen atom and one alkoxy group containing up to 3 carbon atoms are claimed. (3290)

AMINOPLAST FINISHING COMPOSITION RESISTANT TO CHLORINE RETENTION. Brit. Industrial Plastics Ltd. BP 865 319, Apr. 12, 1961.
Creaseproofing and waterproofing agent consisting of 1,3-bis-hydroxymethyliminazolid-2-one and an aliphatic monocarboxylic acid amide, e.g. stearamide is claimed. (3291)

FLUORINE-CONTAINING ORGANOSILICON WATERPROOFING AGENTS. Midland Silicones Ltd. BP 865 335, Apr. 12, 1961. (3292)

POLYMERIC PHOSPHONITRILIC CHLORIDE FLAMEPROOFING AGENTS. Compagnie Francaise des Matières Colorantes. BP 865 396, Apr. 19, 1961. (3293)

PREPARATION OF RUBBERIZED FABRIC WITH A SELF-ADHESIVE INSULATION COATING. W. Brey (to Firestone Tire & Rubber Co.). USP 2 979 106, Apr. 11, 1961.
Apparatus for the preparation and treatment of the edges of rubberized tire fabric to provide for an improved splice when short strips of the fabric, cut on a predetermined bias angle, are joined to form a continuous web. (3294)

GERMPROOFING AGENTS. J. R. Geigy AG. BP 865 675, Apr. 19, 1961.
Because of their excellent water solubility, the 2-imino-1, 3-di-N-heterocyclic compounds claimed can be used in disinfecting textiles. The textiles so treated do not yellow on storage or exposure to light. (3295)

AMINOBENZOIC ACID DERIVATIVES. J. R. Geigy AG. BP 865 735, Apr. 19, 1961.
The use of N-sulfonylated aminobenzoic acid arylamides as mothproofing agents for wool is claimed. (3296)

BENZIMIDAZOLE OPTICAL BRIGHTENING AGENTS FOR NYLON. Vereinigte Glanzstoff Fabriken AG. BP 865 804, Apr. 19, 1961. (3297)

CHLORINE-CONTAINING ORGANIC PHOSPHORUS-NITROGEN FLAMEPROOFING AGENTS. Joh. A. Benckiser GmbH Chemische Fabrik. BP 865 848, Apr. 19, 1961.
Dichloroalkylphosphate amides, imides, and hydrazides are claimed. (3298)

PERMANENT DELUSTERING OF ACETATE AND NYLON. Brit. Celanese Ltd. BP 865 857, Apr. 19, 1961.
The fabric is impregnated with a water-soluble condensate of melamine and formaldehyde, e.g. a methylol melamine, in the presence of tartaric or citric acid and heated in the presence of moisture. (3299)

CREASEPROOFING TREATMENT FOR CELLULOSE YARNS AND FABRICS. O. Jackson (England). BP 866 387, Apr. 26, 1961.
The yarns or fabrics are subjected to two separate impregnations with formaldehyde in the presence of a catalyst to produce condensation, each impregnation being followed by curing or steaming. (3300)

STABILIZATION OF PER-COMPOUNDS. Geigy Co. Ltd. BP 866 492, Apr. 26, 1961.
Per-compounds, e.g. sodium perborate, used in detergent compositions to assist in bleaching during washing are stabilized by the addition of the water-soluble salt of a chelating agent. (3301)

APPARATUS FOR CONTINUOUS WASHING OF WEB TOWELING IN ROPE FORM. Advance Linen Services Ltd. BP 866 755, Apr. 26, 1961. (3302)

COATING SURFACES BY ELECTRODEPOSITION. Commonwealth of Australia. BP 866 780, May 3, 1961.
Colored, decorative, or protective coatings are applied to fabrics, paper, plastic, or leather by moving the material (previously coated with a control agent to maintain a selective surface charge) between electrodes in a bath containing the coating material. (3303)

OIL AND WATER RESISTANT FLUOROCARBON SUBSTITUTED TRIAZINE-FORMALDEHYDE CONDENSATES. Minn. Mining & Mfg. Co. BP 867 279, May 3, 1961. (3304)

ANTISTATIC AGENT FOR SYNTHETIC FILAMENTS. Vereinigte Glanzstoff Fabriken AG. BP 867 820, May 10, 1961.
Amidophosphoric acid esters are claimed. (3305)

MEASUREMENT OF THE AMOUNT OF FINISHING AGENT ABSORBED BY TEXTILE MATERIALS. Gebruder Sucker GmbH. BP 867 327, May 3, 1961.
A predetermined amount of an indicator substance is added to the impregnation bath and the amount left in the textile material is measured at the end of the operation. (3306)

MEANS FOR GUIDING TEXTILES THROUGH FLUID BEDS. Shri Ram Inst. for Industrial Research. BP 867 684, May 10, 1961.
Fine solid particles are prevented from entering the gap between the guide roller shaft and its bearings by directing fine jets of the fluidizing medium into the gap. (3307)

RESIN FINISHING AGENTS. Farbwerke Hoechst AG. BP 868 080, May 17, 1961.
The polyamine urea condensates claimed are useful for imparting water repellency to fabrics, paper, and leather. (3308)

NONPILLING TREATMENT FOR WOOL/MANMADE FIBER BLENDS. Soc. Rhodiaceta. BP 868 166, May 17, 1961.
The fabrics are subjected to brushing, shearing, singeing, and milling. (3309)

HYDROXYKETONE ULTRAVIOLET LIGHT ABSORBERS. Ciba Ltd. BP 868 333, May 17, 1961. (3310)

CHLORITE BLEACHING PROCESS. Solvay & Cie. BP 868 339, May 17, 1961.
In the electrolytic activation of a chlorite solution, corrosion of the apparatus is prevented by the use of a titanium anode. (3311)

MACHINE FOR OPEN WIDTH WET PROCESSING OF FABRICS. B. C. Morton (England). BP 868 425, May 17, 1961.
A high degree of turbulence is produced by the to and fro movement of frames suspended on each side of the tank. (3312)

COATING POLYESTER AND NYLON FABRICS. Imp. Chem. Inds. of Australia & New Zealand Ltd. BP 868 500, May 17, 1961.
Flexible coatings with a high degree of adhesion are composed of an organic isocyanate, a partially condensed polyester, a vinyl terpolymer, a plasticizing polyester, and a catalyst. (3313)

ANTISTATIC AGENTS. Boehme Fettchemie GmbH. BP 868 809, May 25, 1961.
Durable antistatic finishes for synthetic fibers consisting of a hardened water-soluble condensate of an aminotriazine, an aldehyde or ketone, and a polyalkylene oxide are claimed. (3314)

WATER-REPELLENT FABRIC RESISTANT TO DRY-CLEANING AGENTS. J. E. Pritchard (to Phillips Petroleum Co.). USP 2 978 362, Apr. 4, 1961.
The fabric is coated or impregnated with a highly crystalline, halogenated polyethylene. (3315)

CHEMICAL MODIFICATION OF COTTON WITH PERFLUOROALKANOIC ACID. L. Segal, L. Loeb, K. H. Takemura, and F. J. Philips (to U.S. Secy. Agri.). USP 2 980 491, Apr. 18, 1961. (3316)

APPARATUS FOR TREATMENT OF TEXTILES WITH LIQUIDS. W. L. Freeze, J. Cocker, III, and T. F. Suggs (to Cocker Mach. & Foundry Co.). USP 2 977 662, Apr. 4, 1961.
Squeeze roll arrangement for expelling entrained air from the material prior to submersion and for removing excess liquid upon emergence of the material from the bath. (3317)

COATED THREE DIMENSIONAL FABRIC. E. J. Grajeck (to Collins & Aikman Corp.). USP 2 977 664, Apr. 4, 1961.
A woven base fabric containing highly shrinkable yarns on one side and in one direction is coated with a resilient material on the side opposite to the shrinkable yarns. Puffs are formed by heating to cause the yarns to shrink. (3318)

SHRINKPROOFING PROCESS. W. W. McElrath. USP 2 977 665, Apr. 4, 1961.
Shrink resistant yarns, cords, and woven fabrics with improved physical properties are obtained by impregnating the materials under tension with a combination of thermoplastic and thermosetting resins and curing before releasing the tension. (3319)

SCORCH RESISTANT SOFTENING COMPOSITION. A. W. Lanner and R. A. Olney (to Procter & Gamble Co.). USP 2 978 408, Apr. 4, 1961.
The addition of heat labile acid forming salts, e.g. ammonium chloride, to soap-fat softening agents lowers the pH to a level at which the finishes are scorch resistant. (3320)

GASPROOF AND GAS ADSORBENT FABRICS. J. A. Clark (to Am. Viscose Corp.). USP 2 979 157, Apr. 11, 1961.
A fabric permeable to air but impermeable to heavy gases is prepared by coating the fabric with an aqueous dispersion of an alkali-soluble, water-insoluble cellulose colloid and a comminuted carbon. The cellulose colloid is coagulated binding the carbon adsorbent to the fabric. (3321)

PHOSPHONOMETHYLATION OF COTTON. G. L. Drake, Jr., W. A. Reeves, and J. D. Guthrie (to U.S. Secy. Agri.). USP 2 979 374, Apr. 11, 1961.
Fibrous phosphonomethyl ethers of cellulose are prepared by reacting a fibrous cellulose (preferably cotton yarns and fabrics) with an aqueous solution of an alkali metal salt of chloromethyl phosphonic acid and an excess of alkali metal hydroxide. (3322)

CONTINUOUS DYEING MACHINERY. J. Gaino. USP 2 979 933, Apr. 18, 1961.
Arrangement which permits changes in dye liquor or cleaning of equipment without cessation of the process. (3323)

TETRACHLOROMALONAMIDES FOR COTTON BLEACHING. M. Kokorudz (to Wyandotte Chemicals Corp.). USP 2 980 488, Apr. 18, 1961. (3324)

SHRINKPROOFING WOOL. K. S. La Fleur and E. J. Greene (to Deering Milliken Research Corp.). USP 2 980 557, Apr. 18, 1961.
The undesirable side effects of shrinkproofing by halogenation are eliminated by aftertreatment with a polymer consisting of a silicone resin and a Werner type carboxylic acid metal complex. (3325)

COATING POLYESTER AND NYLON FABRICS. D. P. Spencer and H. R. Bourne (Australia). USP 2 981 637, Apr. 25, 1961.
Flexible fabrics with unimpaired tear strength are achieved by the use of a series of coating layers; the first composed chiefly of a toluene diisocyanate reaction production, the second mainly of a vinyl terpolymer, and the third of PVC or a copolymer containing vinyl chloride. (3326)

BACK FILLING OF CARPETS. E. H. Jones (to Brit. Cotton Ind. Research Assoc.). USP 2 981 638, Apr. 25, 1961.
See abstr. 3148/59. (3327)

Dyeing and printing D2

DYEING POLYESTER FIBERS WITH VAT DYES. Hardman & Holden Ltd. BP 863 697, Mar. 22, 1961.
An aqueous dyebath containing a vat dye, thiourea dioxide, a protective colloid, a carrier, and a buffer is heated gradually to 90° C to obtain a stable dispersion of the free leuco derivative of the vat dye at a controlled speed. The slow conversion of the dye is paralleled by a simultaneous absorption of the leuco derivative by the polyester fibers to effect level dyeing. (3328)

AZO DYES DERIVED FROM CYANURIC CHLORIDE FOR COLD DYEING CELLULOSE FIBERS. Ciba Ltd. BP 863 754, Mar. 29, 1961. (3329)

FAST AZO DYEINGS AND PRINTS ON CELLULOSE. Farbwerke Hoechst AG. BP 864 034, Mar. 29, 1961.
The fabrics are dyed with chromium or cobalt complex dyes free from nuclear sulfonic acid groups and derived from azo dyes containing hydroxyethylsulfone groups and then treated with polyalkylene amines or their alkylation and quaternization products. (3330)

PRODUCING WATER INSOLUBLE AZO DYES ON CELLULOSE FIBERS. Farbwerke Hoechst AG. BP 864 228, Mar. 29, 1961.
Developed azo dyeings are produced by coupling 6-(2:3'-hydroxynaphthoylamino)-3-chloroindazole with a substituted or unsubstituted diazonium or tetrazonium compound from a primary mono- or diamine of the benzene or azobenzene series. (3331)

HETEROCYCLIC MONOAZO DYES FOR ACRYLIC FIBERS. Badische Anilin & Soda-Fabrik AG. BP 864 280, Mar. 29, 1961. (3332)

IMPROVING RUBBING FASTNESS OF ICE-COLOR DYEINGS AND PRINTS. Farbwerke Hoechst AG. BP 864 691, Apr. 6, 1961.
The dyeings and prints are aftertreated with a mixture of: aliphatic cycloaliphatic, or aromatic hydrocarbons which may be halogenated; surface active agents; and aliphatic, alicyclic, or heterocyclic alcohols. (3333)

DIAZOAMINO COMPOUNDS FOR PRODUCING ICE COLORS ON CELLULOSE FIBERS. Farbenfabriken Bayer AG. BP 864 829, Apr. 6, 1961. (3334)

DYEING POLYESTER FIBERS WITH 3-HYDROXY-QUINOPHTHALONE DYES. Badische Anilin & Soda-Fabrik AG. BP 865 308, Apr. 12, 1961. (3335)

DIAZO DYEING OF CELLULOSE. Badische Anilin & Soda-Fabrik AG. BP 865 305, Apr. 12, 1961.
Dyeings fast to rubbing, solvents, or peroxides are obtained by coupling diazotized aromatic amines with a compound of the naphthalene series containing sulfonic acid groups of the formula claimed. (3336)

DYEING POLYETHYLENE TEREPHTHALATE FIBERS WITH AZO DYES. Farbenfabriken Bayer AG. BP 865 409, Apr. 19, 1961. (3337)

DYE FIXATION ON PRINTED CELLULOSE FABRICS. Brit. Cotton Ind. Research Assoc. BP 865 659, Apr. 19, 1961.
Vat or sulfur dyes are fixed on cellulose fabrics by passing the fabrics around a system of heated, rotating cylinders with the fabrics sandwiched between two bands of fluid-tight material. (3338)

DYEING CELLULOSE WITH AZO, NITRO, OR VAT DYES CONTAINING ARYLURETHANE GROUPS. Cassella Farbwerke Mainkur AG. BP 865 681, Apr. 19, 1961. (3339)

CELLULOSE DYEINGS WITH IMPROVED WASHFASTNESS. J. R. Geigy AG. BP 865 686, Apr. 19, 1961.
The wetfastness of direct dyed cellulose fibers is improved by aftertreatment with water-soluble resin condensates formed by heating 2-amino-imidazolines. (3340)

ACID ANTHRAQUINONE DYES. J. R. Geigy AG. BP 866 065, Apr. 26, 1961.
Fast dyeings on wool are obtained by the use of the 1-amino-4-arylamino-anthraquinone-2-sulfonic acids. (3341)

COLORED CELLULOSE TRIACETATE FILAMENTS. Brit. Celanese Ltd. BP 866 329, Apr. 26, 1961.
Water-wet filaments made by extruding a solution of cellulose triacetate into aqueous acetic acid are washed free of the acid and subjected to the action of aqueous solutions of metalized dyes. (3342)

DYEING POLYACRYLONITRILE FIBERS. Ciba Ltd. BP 866 335, Apr. 26, 1961.
Fast dyeings with basic dyes are obtained by the use quaternary ammonium compounds as retarding agents. (3343)

FIXING PIGMENTS ON FIBROUS MATERIALS. Farbwerke Hoechst AG. BP 866 767, May 3, 1961.
The fixative comprises an alkali-soluble resin condensate containing reactive carboxylic acid groups (obtained by interacting a polyhydric alcohol with a polycarboxylic acid), a compound containing at least 2 reactive ethylene imine radicals, and a water soluble precondensate of melamine, phenol, or urea and an aldehyde. (3344)

SINGLE BATH DYEING OF WOOL/CELLULOSE BLENDS. Ciba Ltd. BP 867 168, May 3, 1961.
Dyeing is carried out in a bath containing, in addition to the wool dye and direct dye for cellulose, a wool immunizing agent and hexamethylenetetramine. The dyebath has an acid reaction at least at the beginning of the reaction. (3345)

PRESSURE RELEASE MECHANISM FOR DYEING MACHINES. Freeman, Taylor Machines Ltd. BP 869 043, May 25, 1961. (3346)

BINDING AGENT FOR PIGMENT DYEING. Ciba Ltd. BP 867 189, May 3, 1961.
Light and washfast dyeings are produced by the use of acrylate copolymer emulsion binding agents. (3347)

DIAZO DYEING OF CELLULOSE TRIACETATE. Brit. Celanese Ltd. BP 867 202 and 867 203, May 3, 1961.
Black dyeings are obtained by contacting water-swollen triacetate fibers with a diazotizable base, diazotizing the base, and coupling the resulting diazo compound with 2:3-hydroxynaphthoic acid, all three steps being carried out in the presence of water. (3348)

DYEING OF CELLULOSIC TEXTILES WITH AZO DYES. Ciba Ltd. BP 867 521, May 10, 1961.
Aqueous solutions of water-soluble chromium or cobalt complexes of azo dyes containing at least one 2:4-dichloro-1:3:5-triazine radical are applied at 20 to 50° C and the dye is fixed in the presence of an acid-binding agent. (3349)

DYEING OR PRINTING POLYETHYLENE TEREPHTHALATE FIBERS. Ciba Ltd. BP 867 535, May 10, 1961.
The use of monoazo dyes obtained by coupling diazotized amines with a pyrazole is claimed. (3350)

DYEING CELLULOSIC MATERIALS WITH AZO DYES. Ciba Ltd. BP 867 546, May 10, 1961.
Water-soluble azo dyes containing an alkylsulfone group are applied by the foularding method and fixed by steaming in the presence of an inorganic acid-binding agent. (3351)

DYEING CELLULOSE TRIACETATE. Celanese Corp. BP 867 607, May 10, 1961.
Fade and wash resistant dyeings from a wide variety of dyes are obtained by the use of a dyebath containing a monohydric alcohol and an alkali metal or ammonium thiocyanate. (3352)

SPUN DYED VISCOSE RAYON. Imp. Chem. Inds. Ltd. BP 867 983, May 10, 1961. (3353)

DYEING CELLULOSE MATERIALS. Ciba Ltd. BP 868 026, May 17, 1961.
Soluble monoazo dyes containing at least one $\beta:\gamma$-epoxypropyl or $\beta:\gamma$-propylene chlorhydrin bound to the molecule through an amino nitrogen atom are fixed by steaming in the presence of an acid-binding agent. (3354)

PRINTING PILE CARPETS. C.S.C.M. Ltd. BP 868 415 and 868 416, May 17, 1961.
The pile face is pressed downward against a series of flat receptacles having thin upstanding walls defining the design. The receptacles are supplied with a measured amount of coloring matter and the pile is compressed to effect absorption. (3355)

SOLUBLE PERINONE DYES FOR CELLULOSE FIBERS. Ciba Ltd. BP 868 470, May 17, 1961. (3356)

PROCESS FOR DYEING WOOL. Ciba Ltd. BP 869 056, May 25, 1961.
In the dyeing of wool with complex chromium or cobalt compounds of monoazo dyes, a wool immunizing agent with an affinity for the fibers and hexamethylene tetramine are added to the dyebath. (3357)

Mechanical processes D3

CURVED BAR STRETCHING MACHINES. W. Mycock (to Calico Printers Engineers Ltd). BP 852 367, Oct. 26, 1960. Through BCIRA 41: 1122 (1961).
Means for maintaining at a desired constant amount the longitudinal tension in a fabric that is being stretched laterally by passage around a set of three or more curved bars. Some of the bars are driven by variable-speed gear and others are not driven but are free to rotate. The latter move automatically in relation to the driven bars (they rise or fall) in such a way as to vary the driving speed and maintain longitudinal tension constant. (3358)

DEVICE FOR REMOVING CREASES FROM SHEETS BY AN AIR CURRENT BEFORE THEY ENTER A MANGLE OR ROTARY IRONING MACHINE. W. J. Bazelmans (Netherlands). BP 853 018, Nov. 2, 1960. Summary in BCIRA 41: 1346 (1961). (3359)

CALENDER EMBOSSING ROLLS. P. Dornbusch (Germany). BP 863 872, Mar. 29, 1961.
Both the embossing roll and counter roll consist of a metallic core covered with a sleeve of resilient material, e.g. silicone rubber or vinyl chloride plastic. (3360)

COMPRESSIVE SHRINKAGE MACHINE FOR PRODUCING PATTERNED EFFECTS. Bradford Dyers' Assoc. Ltd. BP 863 979 and 864 063, Mar. 29, 1961.
The belt changing operation on the machine is simplified by the provision of elements on which the bearings for the belt rollers can slide clear of the side frames. (3361)

APPARATUS FOR SLITTING FABRIC ROLLS INTO NARROW SPOOLS. Lever Bias Mach. Corp. BP 865 176, Apr. 12, 1961. (3362)

HYDRAULIC BRAKE FOR CONTROLLING TENSION IN A RUNNING WEB DURING PROCESSING. C. Aaron (to Cameron Mach. Co.). USP 2 974 893 and 2 974 894, Mar. 14, 1961. (3363)

PATTERN SHEARING APPARATUS FOR PILE CARPETS. R. C. Gebert, A. Klein, and H. J. Smiley (to James Lees & Sons Co.). USP 2 977 660, Apr. 4, 1961.
Endless pattern template which is fed through the shear simultaneously with the fabric and either masks or accentuates selected areas so that a pattern of different pile height is formed. (3364)

APPARATUS FOR WINDING WEBS WITH PROGRAMMED TENSION. S. C. Larson and J. J. Halliday (to Johnson & Johnson). USP 2 978 200, Apr. 4, 1961. (3365)

SINGEING APPARATUS FOR SYNTHETIC FIBER FABRICS. F. J. Clendening, Jr. (to E. I. du Pont de Nemours & Co.). USP 2 978 783, Apr. 11, 1961.
The fabric passes in wiping contact with the top surface of a uniformly heated hollow metal roll rotating counter to the direction of travel of the fabric. By heating only the surface of the fabric, pill formation is greatly decreased. (3366)

TENSION CONTROL FOR UNWINDING WEBS FROM REELS. F. W. Ralph (to Witton-James Ltd). USP 2 979 280, Apr. 11, 1961. (3367)

APPARATUS FOR SEPARATING AND ROLLING LAYERS OF FABRIC INTO INDIVIDUAL ROLLS. E. W. Jones (to Elastic Fabric Co.). USP 2 979 278, Apr. 11, 1961. (3368)

NONSTOP WINDING OF CONTINUOUS WEBS INTO SUCCESSIVE ROLLS. W. C. A. Beese and H. E. Bergmann (to Azon Corp.). USP 2 980 356, Apr. 18, 1961. (3369)

Drying, setting, conditioning D4

HOT AIR NOZZLES FOR FABRIC DRYING MACHINES. G. Mohring (Germany). BP 864 149, Mar. 29, 1961.
The width of the outlet of the nozzle mouthpiece is adjustable at three points along the length of the nozzle. (3370)

WEB DRYING APPARATUS. Gebruder Sucker GmbH. BP 865 115, Apr. 12, 1961. (3371)

DRYING APPARATUS. H. Fleissner and G. Fleissner (Germany). BP 866 596, Apr. 26, 1961.
Means for automatically controlling the final moisture content of the dried material. (3372)

FABRIC DRYING MACHINE. A. Meier-Windhorst (Germany). BP 867 530 and 867 531, May 10, 1961.
Profiled guide members and the peripheral surfaces of the nozzle wall are arranged so that a heated gas after impinging on the fabric flows around the guide members and impinges again on the web. BP 867 531 relates to the application of the apparatus to a tentering machine. (3373)

TESTING AND MEASUREMENT E

Yarns E2

GRIPPING MEANS FOR ELONGATION TESTING OF ROPE, TOW, OR YARNS. Brit. Nylon Spinners Ltd. BP 866 683, Apr. 26, 1961.
Means for imposing tension on the material to prevent slippage in the gripping area when a load is applied. (3374)

Fabrics E3

NON-DESTRUCTIVE, PORTABLE APPARATUS FOR TESTING THE STRENGTH OF FABRICS. Traitements Chimiques des Textiles. BP 866 174, Apr. 26, 1961.
Fabrics of normal strength may be tested without damage to them by gripping the fabric between the hollow jaws of the hand-operated gripping device described and setting the adjustable leverage system at a slightly lower value than the designated strength. (3375)

MEANS FOR TURNING KNIT TUBULAR FABRIC INSIDE-OUT FOR INSPECTION. Pasolds Ltd. BP 868 738, May 25, 1961. (3376)

FLAW DETECTING APPARATUS. H. Fountain (to Viking Instruments, Inc.). USP 2 978 636, Apr. 4, 1961.
Apparatus for detecting the presence and magnitude of holes in continuous weblike materials, e.g. paper, plastics, felting, etc. (3377)